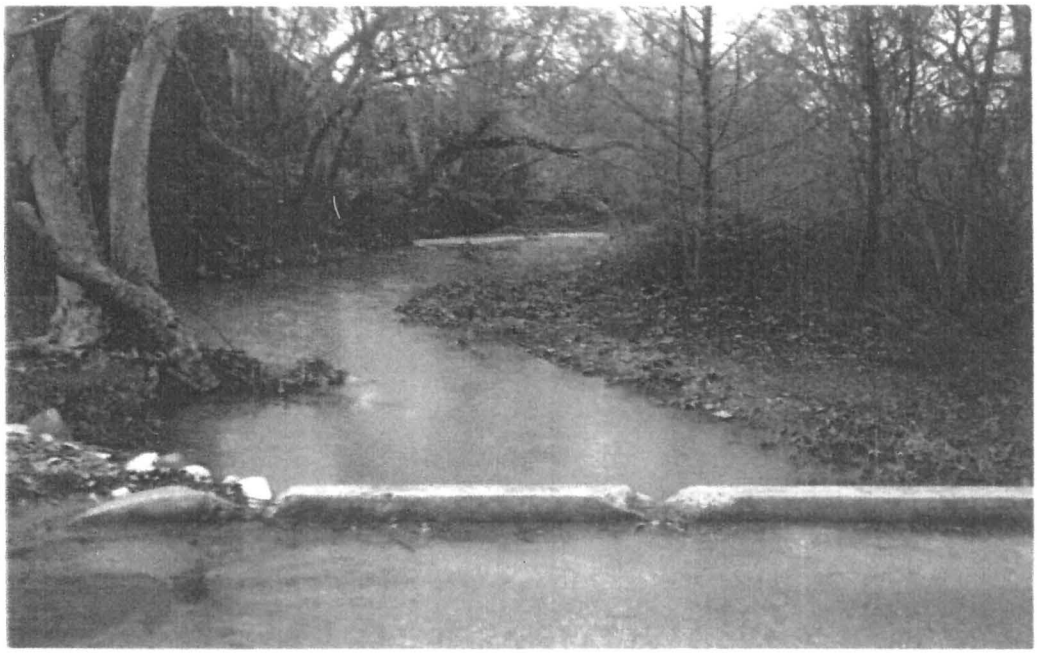
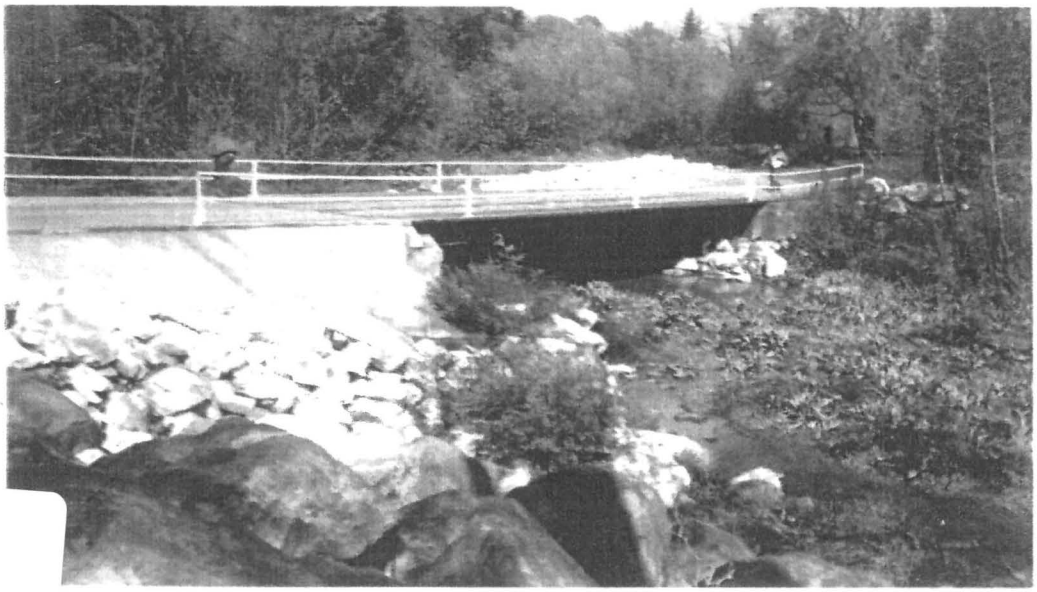
TECHNICAL SUPPORT DATA NOTEBOOK
FOR
UPPER UVAS CARNADERO CREEK
AUGUST 2000



Santa Clara Valley Water District



GB
1227
U9.T42
2000
c.1
LIBRARY

NOLTE

BEYOND ENGINEERING

GB1227U9T422ØØØc.1

SECTION 1
GENERAL
DOCUMENTATION

SANTA CLARA VALLEY WATER DISTRICT
LIBRARY
5750 ALMADEN EXPRESSWAY
SAN JOSE, CALIFORNIA 95118

GENERAL CORRESPONDENCE INDEX

Santa Clara, California

(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

CONTACT REPORT DATE	CONTACT PERSON	AGENCY	ID NO.
N/A	N/A	N/A	N/A

SECTION 2
HYDROLOGIC
ANALYSES

HYDROLOGIC ANALYSES REPORT INDEX

Santa Clara, California

(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

STREAM NAME	DESCRIPTION	FILE NAME	ID NO.
Upper Uvas	Summary of Discharges	002.pdf	N/A
Upper Uvas	Upper Uvas Creek discharges	003.pdf	

0250-89-00 E

San Jose

July 8, 1991
0250-89-02

Mr. Abdullah Saah
District Hydrologist
Santa Clara Valley Water District
6489 Camden Avenue
San Jose, CA 95120

Dear Mr. Saah:

Nolte and Associates is currently preparing revisions to several existing Flood Insurance Studies (FIS) in Santa Clara County as consultant to the Federal Emergency Management Agency (FEMA). We are submitting for your review the enclosed information covering the discharges for the creeks under your jurisdiction. Most of the discharges listed in the table have been published in the previous FIS reports and were obtained and coordinated with you through several meetings and phone conversations. We have yet to revise the flow rates on the Sunnyvale East and Sunnyvale West Channels. The final coordinate flow rates will be published in the final report for this study.

The majority of the flow rates were based on the Urban Hydrology Methodology and Regional Regression Equations developed by the District. The flow rates shown reflect existing conditions in the watershed and take into account of attenuation of overbank storage. Our study is focused on the 100-year flood event and the revision of peak flow rates for the creek becomes necessary only if the difference in discharge exceeds ±20% of the flow quantity.

We appreciate your active participation and full cooperation of this project and look forward to your concurrence in the use of enclosed flow rates for the Flood Insurance Study.

Very truly yours,

NOLTE AND ASSOCIATES

James C. Wang

James C. Wang, Ph.D.
Chief Hydrologist and Engineering Manager

Enclosures

cc: Les Sakamoto, FEMA, Region IX

/c10975-e/11b

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

60 South Market Street, Suite 600, San Jose, CA 95113 Tel. (408) 287-3400 FAX No. (408) 287-6906

S.C.A.L.E.S. 07/08/91

SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQU. MI)	PEAK DISCHARGES 100-YEAR (CFS)
ALAMITOS CREEK		
U/S OF CONFLUENCE W/ARROYO CALERO	16.2	4,750
D/S OF CONFLUENCE W/ARROYO CALERO	28.6	6,750
D/S OF CONFLUENCE W/RANDOL CRK	31.6	7,380
D/S OF CONFLUENCE W/GREYSTONE CRK	33.8	7,800
D/S OF CONFLUENCE W/GOLF CRK	37.4	8,680
U/S OF CONFLUENCE W/GUADALUPE R.	38.0	8,860
SOUTH BABB CREEK		
AT CLAYTON RAOD	3.7	890
U/S OF WHITE ROAD	3.9	570
D/S OF WHITE ROAD	3.9	390
AT CONFLUENCE WITH SILVER CREEK	4.0	290
BERRYESSA CREEK		
AT CONFLUENCE WITH SIERRA CREEK	7.7	2,580
D/S OF CONFLUENCE W/LOS COCHES CR	15.1	1,500
AT CONFLUENCE W/TULARICITOS CRK	17.0	2,120
AT CONFLUENCE W/WRIGLEY DITCH	18.6	2,350
AT CONFLUENCE W/CALERA CRK	21.5	2,730
CALABAZAS CREEK		
U/S OF KIFER ROAD	17.1	3,000
U/S OF U.S. HIGHWAY 101	19.1	3,200
D/S OF U.S. HIGHWAY 101	19.1	4,780
U/S OF STATE HIGHWAY 237	20.5	5,000
CALERA CREEK		
ABOVE HIGHWAY 680	2.4	850
ABOVE MAIN STREET	2.9	920
CANOAS CREEK		
AT COTTLE ROAD	4.6	510
AT SANTA TERESA BOULEVARD	7.4	830
AT BLOSSOM HILL ROAD	12.5	1,400
AT CAPITOL EXPWY	17.6	1,960
U/S OF NIGHTENGALE DRIVE	18.6	2,350
AT CONFLUENCE W/GUADALUPE R.	18.6	1,970
CORRALITOS/TENNANT CREEK		
U/S OF TENNANT	1.3	560
D/S OF TENNANT	3.9	1,600
U/S OF EAST LITTLE LLAGAS	5.6	2,200
GUADALUPE RIVER		
AT BLOSSOM HILL ROAD	53.2	11,500
D/S OF CONFLUENCE W/ROSS CRK	65.2	12,500

U/S OF CONFLUENCE W/CANOAS CRK	70.0	12,000
D/S OF CONFLUENCE W/CANOAS CRK	88.6	12,800
AT MALONE ROAD	90.0	11,900
AT SOUTHERN PACIFIC RAILROAD	92.1	10,900
AT INTERSTATE HIGHWAY 280	95.0	7,000
EAST LITTLE LLAGAS CREEK		
UPSTREAM OF SEYMOUR AVE	6.2	460
AT U.S. HIGHWAY 101	8.0	1,300
WEST LITTLE LLAGAS CREEK		
UPSTREAM OF LLAGAS AVENUE	1.0	400
1000' UPSTREAM OF WRIGHT AVE	1.5	350
AT FOURTH STREET	3.0	600
UPSTREAM OF MONTEREY RD	5.6	1,380
DOWNSTREAM OF MONTEREY RD	5.6	200
DOWNSTREAM OF S.P.R.R.	6.0	200
WEST BRANCH LLAGAS CREEK		
UPSTREAM OF GOLDEN GATE AVE	5.6	1,500
LOS COCHES CREEK		
AT U/S CONFLUENCE W/BERRYESSA CRK	4.0	1,420
LOS GATOS CREEK		
AT STATE HIGHWAY 17	48.8	7,300
MADRONE CHANNEL		
U/S OF EAST LITTLE LLAGAS	5.1	2,100
PERMANENTE DREEK		
U/S OF U.S. HIGHWAY 101	15.8	1,400
D/S OF U.S. HIGHWAY 101	15.8	1,340
D/S OF E. CHARLESTON RD	16.1	1,390
SAN TOMAS AQUINO CREEK		
AT CONFLUENCE W/SARATOGA CRK	39.1	7,100
D/S OF S.P.R.R.	39.3	6,780
AT U.S. HIGHWAY 101	41.8	7,260
AT STATE HIGHWAY 237	45.1	7,550
UPPER SILVER CREEK	6.0	1,830
SUNNYVALE EAST CHANNEL		
SUNNYVALE WEST CHANNEL		
UVAS/CARNADERO CREEK		
D/S OF HECKER PASS RD	65.1	13,600
AT U.S. HIGHWAY 101	71.6	8,300

UVAS CARNADERO CREEK (UPPER)
HYDROLOGIC ANALYSES

The flow rates for Uvas Carnadero Creek (Upper) were reconstructed from Santa Clara County Flood Insurance Study, May 1977, prepared by Nolte and Associates and Letter of Map Revision, April 18, 1991, prepared by Santa Clara Valley Water District.

Discharges were developed from HEC-1 analysis and hyrographs were balanced to match 1976 regional regression (see Section P. General Correspondence). Flow rates are not reduced for capacity restrictions.

Location		Q100
Hecker Pass Road	579+00	13,550 cfs
Bodfish Creek Influence	594+00	10,909 cfs
Downstream Face of Watsonville Road Bridge	647+00	10,362 cfs
Little Arthur Creek Confluence	698+00	8,497 cfs
Downstream of Uvas Road	547+00	7,800 cfs

SECTION 3
HYDRAULIC
ANALYSES

HEC-2 MODELS

WATER SURFACE INDEX

Santa Clara, California

(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

FILE NAME	DESCRIPTION	AGENCY	ID NO.
HydrauSum.pdf	Hydraulic Analyses Desc.	N/A	N/A
Revuvasf.dat			
Revuvasf.out	Base HEC-2 Run		002.pdf

UVAS CARNADERO CREEK (UPPER)
HYDRAULIC ANALYSES

These calculations incorporate the reach of Uvas Carnadero Creek from Hecker Pass to Uvas Dam.

1. Cross-sectional data for the HEC-2 models were developed by Nolte and Associates thru digitization of photo contact prints (dated 1991). Nolte survey crews provided additional topographic information for selected areas.

2. Dimensions of hydraulic structures were field measured by Nolte staff.

3. Channel roughness factors (Mannings 'n') were determined from field investigation and comparison of field notes to the Chow and Barnes references.

   N-values for the channel range from 0.030 to 0.120.

   N-values for right and left overbanks range from 0.030 to 0.100.

4. Water surface elevations were determined using the ACOE's HEC-2 Computer Program.

5. Starting water surface elevation was determined from SCVWD LOMR.

6. HEC-2 Decks:

~~UPUVAS~~ REVUVASF	Floodplain and floodway for Uvas Carnadero (Upper) main creek channel.

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
 *  RUN DATE    09AUG96    TIME   09:28:04 *
 *****************************************
```

```
*************************************
 *  U.S. ARMY CORPS OF ENGINEERS     *
 *  HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D        *
 *  DAVIS, CALIFORNIA 95616-4687     *
*          (916) 756-1104            *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX     XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

1

09AUG96 09:28:04 PAGE 1

THIS RUN EXECUTED 09AUG96 09:28:04

```
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


T1      SANTA CLARA COUNTY FLOOD INSURANCE STUDY
T2      NOLTE and ASSOCIATES (cda/trw)     September 1991
T3      UPPER UVAS CREEK        BASE FLOOD (100-YEAR)

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

         2.                                                                        241.31

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

 1.                -1.


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150

  Starting WSEL from SCVWD LOMR (Sta. 309+50)


NC   .05       .05       .04       .3        .5
ET             9.1       7.1                                   4958.07   5100.     4830.     5250.
QT   2.        13550.    13550.
        SANTA CLARA AREA LEVEE EVALUATION STUDY
        UPPER UVAS CREEK FLOODWAY
        FINAL FLOODWAY RUN; ADJUSTED TO SMOOTH FLOODWAY AND
        MINIMIZE HAZARDOUS VELOCITY INCREASES

        PREPARED SEPTEMBER 1991 BY
        NOLTE AND ASSOC.  (CDA/TRW)
        60 S. MARKET ST., SUITE 600
        SAN JOSE, CA 95113

        STARTING WSEL AND 100-YEAR FLOW WERE TAKEN FROM SCVWD LOMR
          PREPARED DECEMBER 1988 [STA 309+50]

        X-SECTIONS TAKEN LEFT TO RIGHT LOOKING D/S
X1   200.0     29.0      4942.9    5104.7
X3   10.
GR   253.6     4217.0    252.6     4269.8    249.3     4283.0    249.3     4379.7    241.7     4422.5
GR   242.8     4818.4    242.7     4897.3    247.3     4920.8    247.2     4942.9    236.6     4970.2
GR   229.6     4986.6    229.6     5000.0    229.6     5045.3    230.1     5053.3    230.4     5079.0
GR   241.4     5104.7    242.1     5139.3    240.3     5151.1    245.1     5470.0    245.5     5756.7
GR   246.9     5903.7    248.9     5919.4    248.9     5964.5    246.8     5990.7    248.3     6161.8
GR   251.1     6174.9    252.1     6217.4    257.3     6237.2    258.5     6270.3
```

1

09AUG96 09:28:04 PAGE 2

```
ET             9.1       7.1                                   4648.46   4780.     4641.1    4782.6
X1   202.0     14.0      4780.3    5063.2    203.0     250.9     430.4     .69
X3   10.
GR   241.6     4243.0    244.8     4698.4    252.1     4724.5    253.8     4780.3    244.2     4824.8
GR   232.7     4877.6    230.5     4938.9    230.5     5000.0    230.5     5031.4    243.0     5063.2
GR   242.0     5105.8    245.0     5314.4    246.6     5470.4    247.8     5571.6

  D/S Face Hecker Pass Road


ET             9.1       7.1                                   4672.94   4800.     4648.9    4816.9
```

```
          D/S FACE HECKER PASS ROAD (HIGHWAY 152)
X1   204.0    17.0       4837.8     5081.2     66.5       60.1       40.5       .69
X3   10.
GR   241.5    4228.6     244.2      4664.7     252.5      4693.7     253.2      4813.8     252.6      4837.8
GR   244.1    4868.3     234.7      4905.0     230.3      4928.0     230.3      5000.0     230.3      5030.9
GR   241.6    5061.7     246.1      5081.2     250.9      5181.5     254.3      5320.1     257.3      5401.1
GR   256.4    5524.2     258.3      5623.2

  U/S Face Hecker Pass Road


ET            9.11       7.11                                        4679.      4809.      4648.5     4828.0
SB   1.05     1.51       2.6        0.0        118.       2.1        2800.      1.3        0.         0.
          U/S FACE HECKER PASS ROAD BRIDGE
X1   210.0    22.0       4882.0     5141.4     76.3       47.2       63.0       .69
X2                       1.         249.4      250.                                      .69
X3   10.
BT   22.0     4128.8     249.7      248.7      4221.1     250.3      250.0      4666.7     253.3      251.8
BT   4882.0   253.9      251.8      4882.1     253.9      249.9      4913.4     253.9      249.9      4954.7
BT   253.9    249.9      4970.1     253.9      249.9      4989.8     253.9      249.9      5000.0     253.9
BT   249.9    5015.9     254.0      249.9      5076.6     254.4      249.9      5097.0     254.5      249.9
BT   5124.0   254.7      249.9      5141.3     254.8      249.9      5141.4     254.8      251.6      5164.9
BT   255.1    251.5      5177.7     255.2      247.8      5247.9     255.8      253.7      5410.7     258.3
BT   254.9    5597.5     261.0      258.5      5639.5     261.4      259.5
GR   248.7    4128.8     250.0      4221.1     251.8      4666.7     251.8      4882.0     251.7      4882.1
GR   246.6    4913.4     234.8      4954.7     232.4      4970.1     230.4      4989.8     230.4      5000.0
GR   230.4    5015.9     231.2      5076.6     232.3      5097.0     248.0      5124.0     251.5      5141.3
GR   251.6    5141.4     251.5      5164.9     247.8      5177.7     253.7      5247.9     254.9      5410.7
GR   258.5    5597.5     259.5      5639.5

NC   .06      .05        .075

ET            9.1        7.1                                         4717.      4852.      4648.5     4959.
X1   212.0    23.0       4930.4     5188.3     59.5       39.5       42.1       .69
X3   10.
GR   259.7    4200.0     262.7      4333.2     266.7      4473.7     261.6      4620.1     267.0      4706.1
GR   264.1    4721.8     250.5      4746.4     250.9      4802.8     248.9      4885.6     248.7      4930.4
GR   241.3    4957.0     233.6      4967.8     230.8      4986.0     230.8      5000.0     230.8      5026.1
GR   231.1    5098.7     240.3      5133.3     249.3      5165.5     250.3      5188.3     245.4      5206.8
GR    246.4   5363.7     254.3      5440.0     258.0      5631.8
1
   09AUG96      09:28:04                                                                                    PAGE    3


NC                                  .1         .3

ET            9.1        7.1                                         4775.      5191.08    4560.      5220.
X1   214.0    42.0       4935.2     5124.3     593.0      558.3      369.6
GR   274.3    4473.3     255.8      4521.3     253.8      4551.7     252.9      4579.4     239.9      4643.1
GR   234.4    4660.5     236.1      4713.6     238.1      4843.9     233.0      4863.4     233.0      4878.8
GR   237.7    4893.4     238.4      4935.2     236.7      4971.6     234.8      4990.4     233.2      4997.2
GR   233.2    5000.0     233.2      5004.2     234.3      5008.8     234.3      5073.5     241.8      5124.3
GR   243.3    5182.8     250.5      5205.6     251.1      5220.0     246.0      5235.6     247.1      5371.1
GR   250.7    5383.5     250.7      5405.6     255.2      5426.8     259.5      5485.0     260.3      5545.8
GR   256.4    5572.9     249.9      5596.2     252.6      5891.8     257.1      5909.4     267.2      6347.4
GR   270.9    6594.6     271.0      6728.0     270.5      6785.7     268.1      6791.3     268.1      6796.8
GR   272.6    6813.3     274.2      6885.3


ET            9.1        7.1                                         4800.      5175.      4370.      5224.3
X1   216.0    37.0       4892.3     5114.8     251.5      267.9      253.9
GR   263.1    4259.0     258.6      4306.6     249.8      4360.1     248.8      4395.7     244.8      4413.8
GR   243.3    4581.8     242.2      4588.1     242.2      4616.6     244.2      4626.6     243.8      4664.1
GR   237.4    4678.7     237.0      4783.6     236.8      4892.3     234.0      4917.8     234.0      4928.6
GR   235.1    4990.5     234.1      4997.6     234.1      5000.0     234.1      5003.1     234.9      5010.0
GR   235.2    5076.6     237.9      5096.6     243.3      5114.8     243.7      5198.3     252.3      5224.3
GR   251.9    5258.3     249.4      5273.0     250.4      5489.2     257.0      5512.1     260.1      5578.9
GR   256.1    5600.6     250.3      5619.8     253.9      5912.6     257.1      5922.4     264.5      6237.6
GR   263.7    6553.9     268.1      6749.4

NC   .06      .06

ET            9.1        7.1                                         4789.      5103.31    4125.      5500.
X1   218.0    20.0       4781.0     5118.2     312.1      252.2      303.1
GR   268.1    3762.2     262.9      3985.9     258.4      4079.0     249.3      4188.6     247.2      4229.3
GR   247.4    4676.8     247.8      4781.0     241.7      4812.6     240.2      4929.4     237.3      4952.5
GR   236.0    4996.3     236.0      5000.0     236.0      5003.7     236.6      5069.7     245.5      5099.8
GR   249.9    5118.2     251.3      5220.8     252.9      5549.8     259.1      5577.0     258.6      5618.4


ET            9.1        7.1                                         4517.      5278.29    3820.      5450.
X1   220.0    38.0       4916.0     5294.6     386.2      446.0      400.7
GR   269.3    3464.5     266.5      3577.3     266.6      3644.4     262.4      3817.3     254.4      3891.1
GR   249.5    3932.9     248.0      4020.3     246.7      4193.3     244.5      4199.4     244.5      4205.6
GR   246.4    4216.0     247.4      4422.8     245.2      4471.7     236.1      4499.7     236.1      4591.6
GR   248.4    4628.8     249.6      4806.3     248.5      4916.0     238.4      4955.0     237.4      4994.0
GR   237.4    5000.0     237.4      5003.6     238.9      5012.9     238.8      5093.2     238.8      5225.4
GR   246.4    5256.9     247.4      5276.6     251.4      5294.6     252.5      5468.3     261.3      5503.7
GR   259.1    5544.2     252.9      5571.1     259.1      6045.2     260.4      6349.0     262.4      6359.0
GR   261.3    6395.5     264.1      6934.9     264.2      7101.7

  Bodfish Creek Confluence

1
   09AUG96      09:28:04                                                                                    PAGE    4
```

```
QT        2.     10909.     10909.
ET            9.1        7.1                                          4820.       5210.        4129.3      6000.
          BODFISH CREEK CONFLUENCE
X1    222.0     47.0       4918.5     5210.6     338.5      415.1      399.7
GR    273.1     3634.2     265.9      3872.2     256.3      3958.8     251.3      3975.8     249.1      4017.1
GR    247.6     4085.7     248.9      4095.2     249.2      4129.3     248.4      4332.1     248.3      4499.0
GR    245.1     4575.8     245.1      4621.9     247.6      4653.6     248.3      4709.0     247.6      4747.1
GR    244.6     4795.9     239.5      4806.3     239.5      4822.5     244.3      4839.4     244.2      4918.5
GR    241.0     4931.0     241.3      4988.8     240.1      4997.1     240.1      5000.0     240.1      5003.6
GR    240.1     5033.0     242.5      5050.5     242.7      5148.0     243.2      5185.5     247.5      5210.6
GR    245.6     5305.9     255.6      5339.5     254.8      5363.1     250.0      5383.7     248.1      5505.2
GR    253.1     5633.0     252.3      5746.4     255.2      5789.2     257.8      5886.9     258.8      6007.0
GR    264.3     6049.0     262.7      6120.1     260.3      6146.5     261.4      6308.3     266.0      6683.6
GR    270.2     6987.6     273.9      7050.7

ET                         7.1                                          4897.       5307.
X1    224.0     40.0       4896.7     5307.1     406.4      307.2      389.7
GR    273.6     3909.1     268.0      3922.8     268.5      3933.3     266.6      3955.7     267.4      3958.6
GR    262.3     4010.7     259.9      4041.5     256.7      4056.0     251.8      4208.0     250.6      4477.3
GR    251.7     4686.4     249.2      4691.1     249.3      4770.1     248.6      4816.1     249.5      4896.7
GR    243.9     4909.2     242.9      4977.7     240.4      4992.2     240.4      5000.0     240.4      5008.0
GR    241.6     5020.3     242.7      5068.6     244.2      5186.2     246.3      5234.9     246.0      5277.6
GR    244.6     5285.0     244.6      5287.2     249.5      5307.1     249.7      5411.7     254.8      5431.1
GR    255.1     5443.6     249.5      5462.0     250.6      5555.4     253.0      5658.8     253.9      5765.6
GR    254.3     6009.2     260.5      6171.2     266.6      6213.0     270.3      6258.7     272.5      6519.2

ET            9.1        7.1                                          4815.       5200.        4688.       5450.
X1    226.0     46.0       4977.1     5044.4     596.3      611.8      527.9
GR    270.8     3962.5     269.7      3995.2     263.1      4018.9     256.6      4056.1     253.5      4149.7
GR    253.2     4374.3     247.6      4387.9     247.6      4396.3     251.9      4408.1     251.6      4612.6
GR    252.3     4688.9     250.5      4700.5     251.3      4740.2     247.1      4766.3     247.1      4794.6
GR    245.9     4810.0     247.0      4843.7     246.1      4902.6     245.6      4977.1     242.6      4991.7
GR    242.6     5000.0     242.6      5024.8     246.8      5044.4     246.2      5138.3     247.8      5148.2
GR    247.0     5176.2     244.6      5189.0     245.8      5201.3     246.3      5219.7     249.0      5231.4
GR    247.8     5282.3     246.7      5287.1     248.4      5298.7     249.4      5326.7     252.9      5357.7
GR    254.5     5397.9     255.0      5447.6     250.4      5456.8     250.4      5464.5     255.5      5485.9
GR    254.3     5552.8     254.8      5781.3     258.7      5932.5     259.6      6024.3     268.0      6075.4
GR    271.7     6112.7

ET                         7.1                                          4773.       5245.
X1    228.0     42.0       4926.5     5015.3     463.8      457.4      425.5
GR    278.3     3691.4     274.1      3864.4     264.0      3921.7     256.5      3981.0     256.9      4011.2
GR    255.6     4036.9     253.4      4220.8     253.1      4660.9     251.1      4673.4     248.8      4707.0
GR    249.6     4758.4     252.0      4926.5     245.8      4954.3     245.7      4979.7     244.5      4995.9
GR    244.5     5000.0     244.5      5005.8     249.0      5015.3     249.7      5058.1     248.3      5100.7
GR    251.3     5131.8     248.1      5172.6     249.1      5235.0     248.1      5248.4     248.5      5294.3
GR    251.2     5334.2     252.1      5382.0     253.4      5409.5     253.6      5428.4     256.9      5473.6
GR    256.8     5509.9     254.9      5515.9     254.9      5520.6     255.7      5526.1     255.6      5689.8
GR    258.7     5796.5     260.3      5906.4     268.0      5966.0     272.5      6027.3     274.5      6105.6
GR    277.7     6309.3     280.5      6330.4
1
   09AUG96      09:28:04                                                                                    PAGE     5

ET            9.1        7.1                                          4721.       5184.        4227.       6715.1
X1    230.0     47.0       4936.1     5112.6     353.6      405.3      360.9
GR    278.7     3687.3     272.9      3848.0     266.1      3888.0     258.1      3925.5     255.3      3970.6
GR    253.7     3974.9     253.7      3981.1     255.2      3997.6     259.7      4083.1     260.3      4106.0
GR    268.8     4154.8     271.5      4185.6     267.4      4198.0     268.3      4227.0     263.1      4250.9
GR    255.1     4291.8     254.5      4399.2     255.3      4619.8     253.0      4652.4     251.6      4764.2
GR    251.6     4770.3     253.0      4781.7     255.1      4936.1     248.0      4953.0     248.0      4985.7
GR    247.4     4993.0     247.4      5000.0     247.4      5008.9     250.6      5027.3     252.1      5085.4
GR    254.0     5112.6     253.6      5151.1     250.3      5182.7     250.2      5224.6     254.0      5258.4
GR    253.4     5312.5     258.0      5331.5     259.1      5989.4     261.3      6025.1     268.8      6052.8
GR    268.2     6133.5     271.9      6346.7     266.8      6390.7     262.9      6463.1     263.3      6518.9
GR    273.3     6591.0     284.3      6715.1

ET                         7.1                                          4713.       5244.
X1    232.0     35.0       4963.8     5089.0     160.3      203.6      209.6
GR    276.6     3793.1     275.5      3827.2     269.1      3857.6     269.1      3885.1     270.3      3917.4
GR    275.1     3964.1     274.2      4107.4     274.2      4269.5     273.8      4331.7     267.2      4379.1
GR    267.7     4421.1     254.2      4468.9     255.6      4765.9     254.2      4825.0     254.2      4963.8
GR    247.5     4992.0     247.5      5000.0     247.5      5012.3     247.9      5029.4     251.4      5047.2
GR    254.4     5089.0     254.7      5212.6     251.9      5233.6     251.8      5269.9     250.2      5298.1
GR    255.6     5316.2     255.6      5338.2     258.3      5349.8     259.5      6042.6     262.7      6059.1
GR    263.4     6094.3     266.8      6112.3     266.6      6178.0     274.5      6798.7     279.6      6888.3

ET                         7.1                                          4975.       5244.
X1    234.0     24.0       4974.7     5150.2     413.9      208.0      304.6
GR    276.7     3887.1     277.7      4355.7     275.6      4559.7     270.5      4655.9     268.3      4692.5
GR    268.3     4730.9     265.8      4756.7     257.7      4802.2     255.2      4974.7     247.6      4991.2
GR    247.6     5000.0     247.6      5010.7     251.6      5024.3     253.7      5150.2     251.4      5250.2
GR    256.4     5275.6     255.8      5354.5     258.9      5378.6     259.6      6124.7     261.3      6163.6
GR    266.0     6188.2     272.1      6697.4     274.7      6898.4     279.5      6963.7

ET                         7.1                                          4825.       5125.
NC                         .1
```

```
X1   236.0    24.0      4879.1    5088.5    310.2     422.8     306.2
GR   282.1    3467.5    279.2     4275.0    278.4     4547.9    273.3     4620.3    270.7     4702.6
GR   256.1    4736.5    257.3     4879.1    252.7     4903.0    253.4     4986.8    248.5     4996.3
GR   248.5    5000.0    248.5     5006.6    249.8     5021.6    250.2     5052.7    257.5     5088.5
GR   257.4    5112.1    260.2     5126.7    259.9     5724.0    261.1     6267.9    262.5     6272.3
GR   262.7    6295.2    268.1     6310.9    273.3     6690.3    283.5     6724.4

ET                      7.1                                     4825.     5060.
X1   238.0    22.0      4827.0    5061.4    237.5     285.8     228.1
GR   282.4    3746.7    279.7     4380.2    277.0     4532.3    272.9     4710.8    271.3     4748.7
GR   262.4    4771.0    261.8     4827.0    255.5     4849.8    253.3     4986.8    251.6     4995.0
GR   251.6    5000.0    251.6     5004.6    252.9     5018.9    260.8     5061.4    261.6     5328.2
GR   260.7    5911.5    263.0     6050.1    266.0     6412.1    270.5     6452.1    269.9     6518.6
GR   280.3    6556.4    283.4     6909.9
```



```
ET                      7.1                                     4692.     5268.
X1   240.0    27.0      5056.8    5268.6    398.0     548.4     422.2
GR   282.2    3773.3    280.1     4269.0    269.8     4356.4    263.8     4444.4    263.3     4580.6
GR   256.8    4621.2    257.3     4778.1    255.7     4928.1    254.2     4941.6    255.5     4962.6
GR   253.7    4989.4    253.7     5000.0    253.7     5009.0    258.7     5026.6    263.5     5039.2
GR   263.5    5056.8    258.8     5093.9    260.3     5207.6    252.5     5226.8    252.5     5247.3
GR   262.0    5268.6    262.4     5845.1    265.9     5884.9    274.3     6433.2    281.1     6479.1
GR   289.9    6527.6    293.2     6538.9

ET                      7.1                                     4615.     5204.
X1   242.0    27.0      4962.2    5151.9    526.8     399.6     510.1
GR   282.8    3854.8    281.4     4344.0    272.0     4424.9    266.0     4469.9    260.8     4500.8
GR   256.9    4619.6    254.6     4634.8    254.6     4851.7    259.9     4868.0    259.4     4962.2
GR   254.4    4995.8    254.4     5000.0    254.4     5004.2    257.5     5022.0    261.0     5151.9
GR   259.4    5336.5    263.0     5362.3    263.1     5381.1    263.2     5403.1    267.2     5748.6
GR   265.4    5755.1    265.5     5761.6    267.0     5772.8    274.9     6392.8    277.8     6509.3
GR   283.8    6529.3    293.1     6548.2

ET                      7.1                                     4590.     5196.
X1   244.0    33.0      4905.8    5077.8    459.2     319.2     435.0
GR   288.0    3601.7    285.6     4152.8    281.8     4169.4    281.9     4189.3    272.6     4211.4
GR   267.8    4421.6    263.6     4473.7    260.1     4552.5    254.9     4574.8    254.9     4838.5
GR   262.1    4858.8    263.6     4905.8    259.2     4921.7    259.9     4984.5    258.7     4994.2
GR   258.7    5000.0    258.7     5011.8    259.5     5022.3    261.4     5077.8    261.0     5115.2
GR   261.3    5321.3    260.5     5343.6    263.6     5376.6    262.5     5441.7    263.5     5490.0
GR   263.4    5499.9    263.4     5512.5    264.4     5581.7    264.8     5600.3    265.2     5615.5
GR   265.6    5642.4    276.2     6395.0    293.1     6439.9

ET                      7.1                                     4819.     5219.25
X1   246.0    38.0      4935.0    5226.0    375.9     872.9     486.7
GR   279.4    3282.2    280.9     3337.2    282.9     3344.7    283.3     3370.4    286.3     3396.5
GR   287.1    3998.7    283.7     4328.1    279.4     4411.2    271.9     4442.5    271.3     4469.2
GR   265.2    4494.5    265.0     4707.7    261.3     4732.4    261.2     4900.6    265.1     4920.9
GR   265.1    4935.0    261.7     4946.2    261.1     4970.5    260.6     4978.2    260.6     5000.0
GR   260.6    5011.8    261.7     5021.7    262.7     5078.0    261.7     5108.6    264.0     5126.0
GR   264.5    5152.4    264.4     5173.8    264.3     5182.9    264.3     5196.0    264.3     5206.0
GR   265.9    5226.0    265.7     5499.4    265.8     5720.8    271.8     5739.5    274.4     6113.5
GR   279.6    6130.5    280.6     6151.5    286.8     6187.1

ET                      7.1                                     4675.     5325.
X1   250.0    22.0      4940.0    5034.7    577.5     310.0     545.5
GR   290.0    4379.5    289.1     4480.7    266.5     4528.5    264.8     4750.8    263.7     4896.5
GR   268.9    4924.1    268.9     4940.0    262.4     4947.7    261.4     4989.8    261.4     5000.0
GR   261.4    5010.2    266.8     5034.7    267.1     5083.8    265.3     5114.7    264.4     5316.9
GR   266.7    5350.1    268.3     5539.6    270.2     6169.6    276.7     6201.6    281.4     6234.8
GR   286.0    6762.2    294.8     6967.3
```



```
ET                      7.1                                     4942.     5348.
X1   252.0    23.0      4942.0    5038.2    547.5     550.6     510.7
GR   292.1    4799.0    276.1     4830.2    273.2     4859.6    270.7     4942.0    266.6     4961.3
GR   263.3    4983.2    262.0     4992.2    262.0     5000.0    262.0     5007.8    267.3     5038.2
GR   267.7    5210.5    267.2     5317.3    269.0     5375.1    268.7     5428.9    267.2     5450.4
GR   267.0    5470.8    268.9     5482.9    270.5     5931.3    272.4     6515.2    283.5     6565.0
GR   281.9    6578.0    288.6     7182.2    301.7     7286.8

ET                      7.1                                     4961.79   5529.
X1   254.0    26.0      4955.1    5095.7    706.6     568.9     497.7
GR   299.3    4772.4    294.0     4867.0    275.4     4955.1    265.1     4991.8    265.1     5000.0
GR   265.1    5005.5    266.5     5023.1    269.5     5095.7    269.7     5152.0    267.5     5184.2
GR   266.3    5211.5    269.1     5240.4    270.5     5291.3    270.5     5361.9    270.1     5415.9
GR   268.9    5436.3    268.9     5451.1    270.5     5457.8    270.8     5470.7    269.0     5506.3
GR   270.9    5527.4    272.1     5945.2    272.3     6587.3    283.0     6634.5    288.4     7266.1
GR   300.7    7357.9

ET                      7.1                                     4916.     5682.
```

```
X1   256.0    22.0       4916.3     5091.7     610.4      332.5      497.0
GR   298.4    4524.8     280.2      4610.9     271.3      4658.7     273.1      4861.4     272.0      4916.3
GR   269.1    4933.9     268.9      4979.8     267.1      4986.9     267.1      5000.0     267.1      5007.1
GR   268.4    5020.7     271.6      5091.7     271.3      5130.7     269.8      5143.3     271.9      5157.0
GR   272.6    5239.0     272.2      5300.7     273.4      5712.3     273.1      6279.9     284.4      6322.1
GR   287.5    6979.3     295.5      7043.6

ET                        7.1                                         4700.      5740.
X1   258.0    25.0       4912.9     5110.6     452.1      881.6      530.6
GR   307.8    4281.2     281.6      4342.5     279.1      4376.2     274.8      4388.5     275.3      4864.5
GR   275.2    4912.9     272.5      4982.8     269.6      4994.8     269.6      5000.0     269.6      5003.0
GR   271.5    5015.1     273.0      5110.6     271.3      5121.7     271.3      5140.6     273.6      5157.7
GR   272.8    5268.0     275.4      5299.1     275.1      5563.7     274.1      6061.4     284.3      6101.2
GR   285.4    6618.2     289.2      6814.8     299.3      6915.4     302.8      6955.5     306.6      6966.7

  Small River Crossing (No Bridge)

ET            9.1        7.1                                         4720.      5736.      4350.      6640.
        SMALL RIVER CROSSING (NO BRIDGE)
X1   260.0    24.0       4894.7     5162.6     233.2      222.6      208.5
X2                                                                                                     15.
GR   309.2    4207.1     283.3      4264.2     278.8      4408.5     274.9      4479.7     275.5      4855.6
GR   275.7    4894.7     275.6      4894.8     273.0      4906.1     272.3      4982.5     271.8      4989.1
GR   271.8    5000.0     271.8      5013.1     272.8      5026.0     273.5      5106.7     279.6      5162.5
GR   279.7    5162.6     279.7      5188.2     276.0      5208.2     276.3      5514.7     274.9      6022.9
GR   285.1    6071.4     285.6      6465.5     290.8      6753.0     302.9      6812.1
```



```
ET            9.1        7.1                                         4584.      5579.      4450.      6150.
X1   262.0    27.0       4856.7     5045.4     503.4      499.2      523.4
X2                                                                                                     15.
GR   307.0    3998.5     297.4      4032.5     291.6      4065.6     283.2      4285.4     279.5      4440.9
GR   273.1    4492.1     272.9      4504.2     276.3      4543.4     277.5      4629.5     278.3      4856.7
GR   277.0    4899.4     275.5      4940.9     275.3      4982.9     274.2      4995.9     274.2      5000.0
GR   274.2    5004.1     275.9      5014.5     279.6      5045.4     279.8      5109.7     277.1      5119.2
GR   277.7    5554.5     277.3      5881.3     286.6      5925.1     289.2      5974.0     289.4      6245.4
GR   294.4    6457.5     307.8      6604.2

ET            9.1        7.1                                         4500.      5215.      4500.      5630.
NC                                  .3         .5
X1   264.0    28.0       4892.2     5089.8     394.8      303.1      483.1
X2                                                                                                     15.
GR   302.4    3889.0     301.0      3935.9     295.5      3986.1     290.8      4091.4     287.8      4174.4
GR   278.0    4220.7     280.1      4460.8     275.7      4475.6     275.5      4524.3     279.9      4557.4
GR   280.9    4892.2     276.9      4932.0     274.3      4970.3     274.8      4991.2     274.8      5000.0
GR   274.8    5010.2     278.1      5030.0     282.9      5089.8     283.3      5115.0     278.2      5133.9
GR   277.4    5162.0     277.6      5179.9     279.7      5220.2     280.9      5734.8     292.2      5784.4
GR   293.5    5980.6     301.6      6237.7     305.1      6244.7

ET            9.1        7.1                                         4620.      5118.      4620.      5320.
X1   266.0    45.0       4908.2     5035.2     428.6      518.4      505.2
X2                                                                                                     15.
GR   328.1    3689.4     324.3      3703.1     323.2      3727.5     313.7      3777.3     315.5      3785.0
GR   315.1    3808.2     311.1      3821.0     311.1      3828.5     312.9      3865.2     310.3      3952.3
GR   311.1    4032.9     306.9      4128.0     281.7      4186.4     281.1      4355.3     282.6      4675.9
GR   281.2    4790.5     277.1      4819.2     276.9      4832.1     281.5      4869.6     281.7      4908.2
GR   278.5    4935.6     276.9      4973.7     275.3      4994.6     275.3      5000.0     275.3      5006.3
GR   282.3    5035.2     285.2      5106.1     281.7      5116.8     284.0      5731.6     290.0      5756.9
GR   292.4    5775.6     293.0      5786.6     294.8      5793.1     301.3      5926.1     298.8      5935.3
GR   301.9    5941.0     302.4      5968.7     300.8      5976.8     300.7      5979.6     303.1      5984.8
GR   308.5    6146.4     320.1      6219.4     321.1      6239.8     325.1      6256.4     328.9      6315.5

ET            9.1        7.1                                         4822.      5130.      4650.      5130.
X1   268.0    11.0       4944.6     5051.9     574.9      1631.6     516.9
GR   297.6    4669.5     281.8      4780.4     279.4      4944.6     275.6      4993.2     275.6      5000.0
GR   275.6    5008.4     283.5      5051.9     284.0      5191.4     286.0      5378.0     289.8      5398.8
GR   293.4    5483.6

ET            9.1        7.1                                         4803.      4947.6     4712.7     4947.6
X1   270.0    20.0       4848.9     5099.4     395.7      1579.1     209.3      .87
GR   320.3    4494.2     318.1      4619.5     311.4      4724.4     307.1      4760.9     293.6      4809.0
GR   280.4    4848.9     278.4      4910.2     275.9      4988.5     275.9      5000.0     275.9      5013.8
GR   279.4    5041.8     284.6      5099.4     285.2      5358.9     287.7      5403.8     294.1      5601.7
GR   296.2    5730.9     293.4      5738.6     293.4      5740.9     296.1      5744.3     298.3      5905.7

  D/S Face Watsonville Road Bridge
```



```
NC                        .06
QT       2.     10362.     10362.
ET            9.1        7.1                                         4775.      4991.      4765.0     4996.4
        D/S FACE WATSONVILLE ROAD BRIDGE
X1   272.0    19.0       4818.9     5084.8     49.0       58.7       42.6       .87
```

```
X3   10.
GR   310.5    4404.6    297.4     4676.8    291.7     4818.9    278.9     4864.3    277.5     4969.6
GR   276.0    4984.6    276.0     5000.0    276.0     5009.9    282.6     5052.3    290.1     5084.8
GR   289.4    5182.2    287.6     5312.4    291.0     5491.8    296.0     5661.1    296.7     5732.5
GR   294.8    5741.0    294.8     5745.3    296.3     5749.0    298.1     5896.6

  U/S Face Watsonville Road Bridge


ET            9.11      7.11                                    4765.     4976.6    4747.3    4976.6
SB   1.25     1.61      2.6       0.        166.2     4.4       2454.     1.7       0.        0.
        U/S FACE WATSONVILLE ROAD BRIDGE
X1   280.0    20.0      4793.9    5057.5    77.3      106.5     58.4      .87
X2                      1.        289.      292.1                                     .87
X3   10.
BT   20.0     4435.5    309.0     309.0     4685.5    297.2     297.1     4793.9    294.0     294.0
BT   4794.0   293.9     289.4     4827.2    293.4     289.0     4858.4    293.2     288.7     4916.7
BT   292.7    288.3     4982.9    292.2     288.0     5000.0    292.1     288.0     5011.3    292.0
BT   287.8    5026.8    292.0     287.8     5057.4    291.7     287.5     5057.5    291.7     286.8
BT   5068.5   292.1     292.1     5241.6    292.2     292.2     5473.6    294.4     294.4     5609.5
BT   298.8    298.8     5689.0    298.4     298.4     5794.1    297.8     297.8     5879.8    298.8
BT   298.8
GR   309.0    4435.5    297.1     4685.5    294.0     4793.9    293.9     4794.0    285.0     4827.2
GR   279.0    4858.4    277.6     4916.7    276.0     4982.9    276.0     5000.0    276.0     5011.3
GR   277.2    5026.8    286.7     5057.4    286.8     5057.5    292.1     5068.5    292.2     5241.6
GR   294.4    5473.6    298.8     5609.5    298.4     5689.0    297.8     5794.1    298.8     5879.8

NC   .06      .05       .1

ET            9.1       7.1                                     4825.     5025.     4658.6    5114.5
X1   282.0    20.0      4796.4    5071.4    42.9      43.7      60.4      .9
GR   302.1    4587.2    295.5     4790.3    294.7     4796.4    286.6     4837.2    277.5     4881.9
GR   276.1    4988.2    276.1     5000.0    276.1     5019.0    281.2     5050.0    288.6     5071.4
GR   289.2    5257.2    294.2     5437.3    299.6     5536.0    299.4     5674.0    299.0     5782.5
GR   298.9    5902.0    299.4     5938.2    297.6     5943.5    301.4     5968.8    302.2     6004.1

NC                                .1        .3

ET            9.1       7.1                                     4930.     5040.     4650.     6055.
X1   284.0    29.0      4925.3    5066.1    266.4     214.2     485.4
X3      10.
GR   327.1    4423.5    318.5     4639.1    305.8     4692.5    305.8     4706.9    314.1     4753.9
GR   311.5    4832.3    296.4     4874.1    290.8     4925.3    280.7     4963.1    277.0     4980.7
GR   277.0    5000.0    277.0     5021.2    293.0     5066.1    306.5     5132.9    312.5     5173.2
GR   315.4    5249.3    310.8     5440.7    307.8     5594.0    305.7     5645.1    298.2     5733.0
GR   295.6    5818.4    300.9     5844.4    300.2     5876.2    293.8     5925.1    283.8     5966.6
GR   283.8    5988.3    284.6     6022.4    293.4     6055.2    296.1     6238.8
```

1

09AUG96 09:28:04 PAGE 10

```
  Little Arthur Creek Confluence


QT       2.       8497.      8497.
ET                          7.1                                     4965.     5040.
        LITTLE ARTHUR CREEK CONFLUENCE
X1   286.0    25.0      4940.9    5087.6    410.0     518.4     508.1
X3      10.
GR   340.6    4606.0    334.5     4679.9    328.7     4703.1    328.2     4829.0    313.5     4871.5
GR   307.0    4940.9    296.3     4968.8    279.4     4983.7    279.4     5000.0    279.4     5015.2
GR   294.2    5035.2    309.8     5087.6    319.3     5240.0    319.6     5706.5    317.7     5826.5
GR   321.6    5932.7    324.1     6030.2    321.9     6120.5    318.3     6203.7    317.6     6284.8
GR   306.4    6354.0    287.0     6395.1    287.0     6411.8    297.0     6429.1    300.1     6731.0

NC   .05                  .08

ET                          7.1                                     4915.     5085.
X1   288.0    23.0      4952.1    5073.0    381.4     411.4     400.1
GR   388.9    4564.4    336.1     4669.9    321.5     4702.6    322.9     4738.4    310.8     4770.8
GR   300.4    4808.8    291.8     4952.1    282.8     4988.5    282.8     5000.0    282.8     5009.8
GR   296.5    5073.0    298.2     5509.6    315.1     5569.2    324.9     5818.7    327.3     6075.8
GR   332.7    6165.2    340.3     6260.6    339.9     6323.8    336.3     6388.6    334.8     6558.2
GR   336.0    6646.6    334.3     6807.9    333.0     6978.9


ET                          7.1                                     4850.     5150.
X1   290.0    20.0      4947.8    5099.9    425.2     375.4     442.0
GR   335.6    4370.9    318.4     4442.6    314.4     4448.7    315.3     4488.4    309.7     4513.6
GR   300.1    4653.5    298.6     4879.5    296.4     4947.8    283.0     4986.3    283.0     5000.0
GR   283.0    5013.1    291.1     5048.1    296.8     5099.9    298.9     5264.3    304.1     5495.1
GR   312.9    5537.2    321.6     5583.9    326.0     5729.0    326.9     5907.8    335.0     6108.6


ET                          7.1                                     4750.     5116.8
X1   292.0    32.0      4884.9    5144.9    316.6     353.5     443.5
GR   363.1    3368.6    360.0     3419.8    355.3     3440.8    347.1     3611.2    331.5     3781.0
GR   320.1    3965.1    317.1     3977.1    304.3     4275.8    299.8     4569.9    297.1     4607.2
GR   294.1    4616.0    294.2     4628.8    296.1     4646.1    300.1     4762.1    300.5     4884.9
GR   294.5    4917.2    293.8     4980.7    285.6     4993.0    285.6     5000.0    285.6     5009.1
GR   290.0    5067.2    307.9     5144.9    313.5     5207.1    323.5     5306.4    329.0     5433.1
GR   334.5    5535.5    343.5     5615.9    349.3     5696.7    345.7     5770.3    345.7     5816.9
GR   355.8    5889.1    370.1     5986.3


ET                          7.1                                     4700.     5083.89
```

```
X1   294.0   25.0     4947.2   5079.0   416.9    400.8    539.3
GR   349.2   3410.6   343.4    3452.5   337.0    3539.7   330.5    3758.8   328.4    3825.8
GR   324.3   3833.7   325.9    3840.8   310.9    4248.9   298.8    4594.3   298.2    4601.3
GR   300.0   4615.3   302.3    4834.8   299.8    4893.2   296.6    4947.2   291.1    4969.7
GR   286.4   4991.6   286.4    5000.0   286.4    5013.6   292.9    5044.9   300.7    5079.0
GR   316.7   5128.8   323.7    5195.3   335.6    5330.4   340.9    5368.6   363.6    5434.1
```



```
ET                    7.1                                4800.    5049.96
X1   296.0   21.0     4961.4   5095.6   402.0    467.7    506.0
GR   349.4   3436.3   345.9    3464.3   345.6    3507.1   339.2    3628.9   331.4    3834.9
GR   330.7   3935.0   326.5    3954.8   310.6    4393.0   301.9    4576.3   301.7    4659.7
GR   304.1   4779.3   303.7    4866.4   301.9    4961.4   289.0    4992.6   289.0    5000.0
GR   289.0   5009.7   304.3    5050.5   316.7    5095.6   325.4    5186.2   335.5    5284.2
GR   352.2   5354.0

ET                    7.1                                4850.    5067.44
X1   298.0   21.0     4931.0   5095.2   400.5    309.4    509.1
GR   354.4   3683.7   348.2    3778.0   342.2    3865.4   338.9    3945.0   332.5    4100.3
GR   333.9   4116.8   333.5    4143.4   327.4    4165.2   324.8    4227.9   312.5    4449.7
GR   306.2   4600.5   306.7    4748.3   306.3    4931.0   294.0    4985.3   294.0    5000.0
GR   294.0   5010.2   314.8    5095.2   326.5    5180.4   327.4    5194.3   343.6    5253.7
GR   363.7   5336.9

ET                    7.1                                4880.    5054.53
X1   300.0   13.0     4953.6   5083.6   490.7    416.7    498.6
GR   338.5   4310.1   338.5    4335.2   335.8    4363.6   332.6    4437.8   315.5    4524.8
GR   309.6   4590.0   308.9    4690.8   310.2    4953.6   295.3    4982.8   295.3    5000.0
GR   295.3   5014.5   322.2    5083.6   343.0    5178.4

ET                    7.1                                4750.    5059.52
X1   302.0   17.0     4966.6   5069.9   548.9    617.3    527.9
GR   339.9   4378.7   332.0    4388.8   331.9    4422.8   323.8    4442.8   320.7    4469.2
GR   314.8   4509.4   311.4    4514.0   312.3    4518.0   311.1    4569.3   314.4    4758.8
GR   314.3   4912.4   311.0    4966.6   298.3    4994.7   298.3    5000.0   298.3    5006.0
GR   317.6   5069.9   347.2    5245.1

ET                    7.1                                4550.    5038.11
X1   304.0   13.0     4951.9   5080.1   545.9    565.6    544.3
GR   342.6   4321.3   327.9    4360.9   320.4    4365.6   319.4    4401.8   315.2    4410.7
GR   314.6   4491.5   318.8    4830.0   316.1    4951.9   303.3    4992.7   303.3    5000.0
GR   303.3   5008.7   339.6    5080.1   339.5    5090.1

ET                    7.1                                4650.    5042.28
X1   306.0   15.0     4963.9   5059.4   553.4    593.6    516.9
GR   357.5   4142.5   326.3    4294.6   322.8    4352.6   322.7    4393.0   319.3    4408.2
GR   317.0   4515.0   317.9    4929.3   316.1    4963.9   308.1    4994.7   308.1    5000.0
GR   308.1   5007.1   326.8    5059.4   334.8    5108.3   344.8    5174.9   353.9    5251.8

ET          9.1      7.1                                4510.    5100.    4510.    5330.
X1   308.0   22.0     4932.3   5057.5   628.9    521.7    538.1
GR   346.5   4006.4   334.2    4102.2   331.6    4110.6   331.7    4129.6   326.5    4141.2
GR   328.7   4152.4   327.8    4187.6   324.3    4198.9   319.7    4460.6   323.3    4572.9
GR   323.8   4741.4   321.8    4912.5   317.4    4932.3   316.5    4979.9   311.9    4993.1
GR   311.9   5000.0   311.9    5007.5   316.0    5033.5   319.5    5057.5   324.6    5144.8
```



```
GR   334.6   5230.1   346.4    5284.9

NC                              .3       .5

ET          9.1      7.1                                4775.    5150.    4740.    5260.
X1   310.0   24.0     4968.3   5033.1   642.7    739.7    535.6
GR   352.0   3945.9   350.5    3981.5   343.0    4027.1   334.7    4080.0   333.1    4118.1
GR   331.9   4124.9   324.4    4354.7   325.6    4495.7   324.5    4728.8   323.1    4792.2
GR   320.1   4830.1   318.9    4848.7   318.9    4858.9   324.3    4882.8   325.1    4926.2
GR   324.7   4968.3   316.5    4992.5   316.5    5000.0   316.5    5008.8   324.3    5033.1
GR   328.7   5272.3   340.1    5351.4   346.0    5442.8   350.2    5498.6

ET                    7.1                                4825.0   5075.0
X1   312.0   20.0     4947.7   5079.6   819.6    816.5    502.2
GR   352.5   4175.9   342.6    4234.3   339.5    4290.0   337.6    4306.3   333.0    4490.0
GR   328.7   4790.9   325.9    4896.2   325.8    4899.4   327.0    4914.1   325.4    4947.7
GR   323.7   4972.3   317.0    4992.2   317.0    5000.0   317.0    5009.6   329.2    5079.6
GR   329.2   5349.2   335.7    5478.3   336.7    5504.4   347.0    5580.1   356.8    5662.8

ET          9.1      7.1                                4845.    5150.    4400.    5340.
X1   314.0   24.0     4899.3   5052.5   713.9    657.2    504.5
GR   361.8   3993.6   359.2    4023.5   345.8    4077.4   336.3    4168.8   337.0    4178.5
GR   337.0   4197.4   335.9    4203.2   333.2    4395.7   329.1    4579.7   328.8    4600.1
GR   331.5   4714.3   332.1    4899.3   326.2    4938.3   324.0    4962.5   318.6    4994.3
GR   318.6   5000.0   318.6    5004.7   326.2    5021.2   330.8    5052.5   331.9    5089.8
GR   332.5   5323.5   339.2    5377.8   348.6    5441.5   357.3    5558.7
```

```
NC                      .045

ET          9.1         7.1                                     4895.       5100.       4510.       5140.
X1   316.0  19.0        4950.5      5044.6      538.0       608.9       591.4
GR   344.3  4157.7       342.3      4174.0      337.7      4325.6       332.5      4537.3       331.0      4551.7
GR   331.0  4559.0       333.9      4585.7      334.7      4805.9       331.5      4822.0       331.0      4870.6
GR   331.5  4950.5       323.0      4980.4      323.0      5000.0       323.0      5021.6       328.6      5044.6
GR   330.8  5107.6       341.8      5221.9      346.2      5269.7       347.1      5349.6

NC   .03    .03         .03

  D/S Face Old Creek Road Bridge

ET          9.11        7.11                                    4845.       5119.73     4520.       5140.
        D/S FACE OLD CREEK ROAD BRIDGE
X1   318.0  24.0        4971.5      5016.0      46.0        44.0        35.5
BT   24.0   4012.6      351.0       351.0       4135.6      345.7       345.7       4157.1      345.0       345.0
BT   4355.3 337.8       337.8       4683.1      332.8       332.8       4847.3      330.4       330.4       4971.5
BT   331.1  331.0       4984.4      331.1       330.5       4984.5      331.1       330.5       4994.6      331.1
BT   330.5  4994.7      331.1       330.5       4995.1      331.1       330.5       4995.2      331.1       330.5
BT   5000.0 331.1       330.5       5005.2      331.1       330.5       5005.3      331.1       330.5       5005.7
BT   331.1  330.5       5005.8      331.1       330.5       5015.9      331.1       330.5       5016.0      331.1
BT   330.5  5061.7      332.0       330.6       5193.7      339.5       339.5       5334.5      347.2       346.4
BT   5448.1 355.6       354.8
GR   351.0  4012.6      345.7       4135.6      345.0       4157.1      337.8       4355.3      332.8       4683.1
1
   09AUG96      09:28:04                                                                                    PAGE   13

GR   330.4  4847.3      331.0       4971.5      330.5       4984.4      324.7       4984.5      324.7       4994.6
GR   330.5  4994.7      330.5       4995.1      324.7       4995.2      324.7       5000.0      324.7       5005.2
GR   330.5  5005.3      330.5       5005.7      324.7       5005.8      324.7       5015.9      330.5       5016.
GR   330.6  5061.7      339.5       5193.7      346.4       5334.5      354.8       5448.1

  U/S Face Old Creek Road Bridge

ET          9.11        7.11                                    4843.6      5103.4      4548.6      5103.4
        U/S FACE OLD CREEK ROAD BRIDGE
X1   320.0  27.0        4977.5      5016.0      44.8        29.5        43.8
BT   27.0   3986.5      355.8       353.9       4124.7      347.7       347.7       4135.3      346.8       346.6
BT   4138.1 346.8       346.8       4172.3      345.6       345.5       4351.8      338.5       337.8       4571.0
BT   333.9  333.2       4791.8      333.2       333.2       4945.8      331.9       331.9       4977.5      331.1
BT   331.0  4984.4      331.1       330.5       4984.5      331.1       330.5       4994.6      331.1       330.5
BT   4994.7 331.1       330.5       4995.1      331.1       330.5       4995.2      331.1       330.5       5000.0
BT   331.1  330.5       5005.2      331.1       330.5       5005.3      331.1       330.5       5005.7      331.1
BT   330.5  5005.8      331.1       330.5       5015.9      331.1       330.5       5016.0      331.1       330.5
BT   5061.7 332.0       331.6       5193.7      339.5       339.5       5334.5      347.2       346.4       5448.1
BT   355.6  354.8
GR   353.9  3986.5      347.7       4124.7      346.6       4135.3      346.8       4138.1      345.5       4172.3
GR   337.8  4351.8      333.2       4571.0      333.2       4791.8      331.9       4945.8      331.0       4977.5
GR   330.5  4984.4      324.9       4984.5      324.9       4994.6      330.5       4994.7      330.5       4995.1
GR   324.9  4995.2      324.9       5000.0      324.9       5005.2      330.5       5005.3      330.5       5005.7
GR   324.9  5005.8      324.9       5015.9      330.5       5016.0      331.6       5061.7      339.5       5193.7
GR   346.4  5334.5      354.8       5448.1

NC   .06    .06         .08

ET          9.1         7.1                                     4830.       5100.       4490.       5100.
X1   322.0  24.0        4954.3      5028.3      52.7        12.9        60.3
GR   353.3  4036.6      348.1       4147.9      346.7      4150.3       347.4      4157.2       347.4      4174.8
GR   344.5  4218.9      336.9       4411.6      334.8      4538.9       334.1      4630.7       333.6      4756.5
GR   335.9  4782.0      336.6       4836.4      332.2      4859.9       332.3      4954.3       325.0      4991.1
GR   325.0  5000.0      325.0       5008.9      330.5      5028.3       333.5      5117.1       340.7      5225.0
GR   343.4  5295.0      344.4       5298.7      348.1      5369.8       355.4      5478.8

ET                      7.1                                     4850.       5150.
X1   324.0  24.0        4988.6      5056.2      291.6       465.2       511.2
GR   354.3  4153.9      347.6       4208.7      344.4      4278.6       342.5      4289.5       343.8      4301.5
GR   343.3  4323.5      341.6       4351.8      337.8      4482.4       336.7      4679.8       334.3      4789.7
GR   331.3  4837.9      332.6       4888.6      332.8      4955.8       331.4      4988.6       328.1      4995.4
GR   328.1  5000.0      328.1       5004.3      334.7      5056.2       337.5      5163.5       343.1      5371.1
GR   342.5  5389.8      342.5       5396.4      344.4      5409.6       352.1      5615.1

NC                      .06

ET                      7.1                                     4854.       5085.
X1   326.0  22.0        4954.6      5039.5      294.5       302.4       217.3
GR   372.8  4113.8      372.2       4214.8      367.6      4292.2       365.2      4333.4       350.7      4382.0
GR   343.3  4423.6      340.2       4439.8      340.9      4442.4       340.4      4473.9       338.0      4544.7
GR   338.5  4735.0      336.5       4819.5      334.2      4954.6       330.5      4986.1       330.5      5000.0
GR   330.5  5011.6      333.2       5039.5      336.2      5140.5       341.5      5392.3       350.5      5668.6
1
   09AUG96      09:28:04                                                                                    PAGE   14

GR   361.7  5853.4      372.5       5947.9

ET          9.1         7.1                                     4930.       5065.       4753.6      5231.9
X1   328.0  34.0        4950.0      5065.5      668.8       515.1       508.5
GR   372.7  4291.4      372.7       4338.5      364.9      4510.9       358.1      4578.8       353.1      4601.0
GR   354.0  4606.3      354.0       4634.4      349.8      4677.7       346.9      4722.2       344.2      4734.7
GR   344.2  4751.5      344.6       4772.8      340.7      4826.8       336.7      4881.4       339.6      4920.9
GR   338.8  4950.0      333.5       4978.7      330.7      4986.9       330.7      5000.0       330.7      5014.9
```

```
GR   339.2    5065.5    342.2     5186.8    343.5     5318.4    343.3     5410.2    341.5     5447.0
GR   347.5    5517.5    350.4     5558.5    350.8     5601.3    350.6     5742.2    353.1     5832.2
GR   361.1    5901.3    369.9     5983.4    384.6     6031.6    384.6     6043.9


ET            9.1       7.1                                     4927.     5046.     4850.     5135.5
X1   330.0    22.0      4953.1    5037.9    414.8     432.7     385.5
GR   380.1    4241.0    371.3     4506.4    367.8     4522.7    369.0     4564.3    361.0     4678.6
GR   350.0    4793.1    341.6     4856.4    340.9     4868.3    341.8     4953.1    335.6     4975.7
GR   331.2    4985.5    331.2     5000.0    331.2     5023.3    339.9     5037.9    342.5     5113.9
GR   348.0    5306.6    354.2     5596.3    362.5     5944.9    367.4     6017.2    371.9     6054.0
GR   371.9    6065.7    382.0     6118.8

NC   .030     .030      .030

  D/S Face Heritage Way Bridge

ET            9.11      7.11                                    4930.     5095.     4861.4    5124.1
        D/S FACE HERITAGE WAY BRIDGE
X1   332.0    30.0      4974.8    5039.1    14.8      70.8      45.5
BT   30.0     4198.7    383.1     383.1     4484.7    372.7     372.7     4501.2    370.5     370.5
BT   4511.4   371.4     371.4     4557.2    370.3     370.3     4717.5    360.1     360.1     4827.2
BT   353.1    353.1     4872.2    341.4     341.2     4918.2    341.5     340.5     4974.8    342.0
BT   341.1    4977.     342.7     341.      4977.1    342.7     341.      4978.9    342.7     341.0
BT   4979.0   342.7     341.0     5000.0    342.7     341.0     5021.0    342.7     341.0     5021.1
BT   342.7    341.0     5022.9    342.7     341.      5023.     342.7     341.      5039.     342.4
BT   341.0    5039.1    342.5     342.5     5212.0    346.0     346.0     5327.4    346.0     345.5
BT   5431.8   350.0     350.0     5700.1    356.7     356.2     6023.7    367.8     366.8     6121.6
BT   375.1    371.5     6159.4    376.2     373.0     6184.6    385.7     376.4     6221.2    395.0
BT   378.7
GR   383.1    4198.7    372.7     4484.7    370.5     4501.2    371.4     4511.4    370.3     4557.2
GR   360.1    4717.5    353.1     4827.2    341.2     4872.2    340.5     4918.2    341.1     4974.8
GR   341.     4977.     338.3     4977.1    338.3     4978.9    331.3     4979.0    331.3     5000.0
GR   331.3    5021.0    338.3     5021.1    338.3     5022.9    341.      5023.     341.0     5039.0
GR   342.5    5039.1    345.7     5212.0    345.5     5327.4    350.0     5431.8    356.2     5700.1
GR   366.8    6023.7    371.5     6121.6    373.0     6159.4    376.4     6184.6    378.7     6221.2

  U/S Face Heritage Way Bridge

1
   09AUG96      09:28:04                                                                          PAGE   15


ET            9.11      7.11                                    4910.     5090.     4881.4    5144.1
        U/S FACE HERITAGE WAY BRIDGE
X1   340.                                      20.       20.       20.
X2                                                                 1.

NC   .05      .050      .08

ET            9.1       7.1                                     4900.     5100.     4836.2    5189.3
X1   342.0    24.0      4971.5    5034.0    45.2      44.3      45.2
GR   379.9    4244.4    372.5     4474.0    371.3     4487.6    372.5     4497.3    366.7     4657.7
GR   360.3    4781.7    356.5     4818.8    344.4     4862.2    340.8     4884.7    340.3     4971.5
GR   336.1    4983.8    331.3     4990.1    331.3     5000.0    331.3     5016.3    339.6     5034.0
GR   344.5    5211.9    348.0     5367.8    347.7     5379.4    351.3     5504.0    362.3     5914.5
GR   370.9    6138.5    371.4     6174.5    379.3     6197.6    381.0     6253.8


ET                      7.1                                     4907.19   5100.
X1   344.0    24.0      4970.3    5040.9    519.0     516.5     502.4
GR   390.6    4085.6    382.3     4245.0    380.8     4254.8    381.8     4265.3    377.2     4631.3
GR   370.7    4693.6    366.5     4816.3    363.4     4861.4    346.9     4908.3    337.8     4937.8
GR   336.7    4970.3    331.8     4988.6    331.8     5000.0    331.8     5009.6    337.9     5040.9
GR   342.7    5062.1    345.5     5148.9    348.0     5260.2    351.6     5545.3    359.0     5941.0
GR   364.6    5988.6    364.4     6001.4    387.0     6067.3    386.0     6180.1

NC            .07                 .1        .3

ET                      7.1                                     4914.     5028.
X1   346.0    23.0      4976.2    5028.7    474.9     496.6     495.2
GR   424.3    3875.7    399.9     3961.4    390.4     4017.4    388.9     4032.7    389.3     4036.4
GR   388.6    4068.3    379.1     4324.5    375.7     4441.1    376.2     4615.7    371.8     4755.2
GR   367.0    4771.5    365.7     4849.6    343.0     4895.5    341.4     4952.9    341.2     4976.2
GR   334.8    4991.8    334.8     5000.0    334.8     5005.9    346.3     5028.7    349.5     5235.6
GR   351.4    5566.5    353.6     5901.3    409.2     6008.5


ET                      7.1                                     4918.     5045.0
X1   348.0    25.0      4951.9    5047.2    323.9     284.6     263.4
GR   385.3    4242.6    381.1     4324.9    372.9     4369.9    365.5     4409.9    361.3     4525.1
GR   361.1    4662.4    361.6     4722.6    360.8     4753.1    357.1     4762.7    353.0     4828.3
GR   350.3    4874.9    345.1     4893.3    344.9     4951.9    336.3     4994.0    336.3     5000.0
GR   336.3    5005.2    349.9     5047.2    351.1     5212.8    352.7     5452.8    352.2     5649.7
GR   356.8    5851.6    355.4     5859.9    367.2     5878.9    368.2     5898.9    417.9     6031.8

QT       2.       7800.      7800.

ET                      7.1                                     4847.48   5059.0
X1   350.0    25.0      4839.4    5058.9    204.9     219.8     225.5
GR   397.9    3891.6    389.0     4155.1    378.4     4376.0    376.0     4439.0    367.3     4477.6
GR   363.9    4518.5    363.7     4545.3    369.3     4601.0    374.3     4653.2    374.2     4705.6
GR   364.1    4757.4    356.1     4793.6    354.1     4839.4    341.3     4886.4    341.3     4970.8
GR   337.5    4993.9    337.5     5000.0    337.5     5005.5    351.5     5058.9    352.0     5266.3
GR   353.7    5655.6    358.7     5875.0    365.6     5886.8    367.0     5902.7    390.3     5998.9
1
```

```
NC            .08                .3          .5

ET            9.1        7.1                                   4881.26    5052.      4780.      5350.
X1   352.0    29.0       4864.2     5053.1     407.7      391.7      430.2
GR   382.3    4078.8     375.1      4189.9     373.0      4221.3     367.6      4236.7     367.6      4243.8
GR   371.5    4258.8     372.0      4294.8     378.9      4355.0     382.4      4402.6     380.3      4543.9
GR   378.6    4605.8     370.9      4652.0     361.4      4700.9     358.6      4796.5     356.8      4864.2
GR   346.1    4922.7     345.4      4982.9     344.0      4997.0     344.0      5000.0     344.0      5003.8
GR   354.5    5053.1     354.5      5164.2     350.7      5182.7     352.3      5219.3     356.0      5378.7
GR   359.7    5525.2     368.6      5782.1     375.5      5813.7     379.8      5894.8

ET            9.1        7.1                                   4939.      5070.      4840.      5170.
X1   354.0    32.0       4939.5     5067.7     445.4      528.6      432.6
GR   409.5    3187.6     398.4      3532.3     388.2      3672.8     374.8      3761.2     374.8      3775.9
GR   376.5    3808.6     385.3      3826.1     385.0      3864.7     388.0      3876.9     392.0      3946.2
GR   392.9    4050.5     387.0      4230.5     382.1      4482.6     374.0      4572.5     365.9      4645.1
GR   358.3    4873.1     354.6      4939.5     345.0      4987.3     345.0      5000.0     345.0      5023.6
GR   354.4    5067.7     356.9      5115.6     354.3      5190.2     354.7      5221.2     356.7      5295.3
GR   356.2    5354.7     356.4      5415.7     359.3      5450.5     359.3      5489.6     363.3      5494.9
GR   367.2    5663.9     435.7      5818.9

ET            9.1        9.1                                   4952.      5100.      4900.      5100.
X1   356.0    21.0       4965.5     5055.6     363.9      321.1      259.0
GR   398.2    3402.9     401.1      3474.0     397.8      3801.6     390.2      4204.3     386.6      4236.2
GR   383.3    4248.1     381.1      4399.3     370.9      4635.9     360.9      4840.7     352.2      4965.5
GR   345.5    4986.7     345.5      5000.0     345.5      5020.6     354.0      5055.6     354.9      5112.9
GR   357.5    5241.7     360.1      5376.6     358.3      5541.8     362.4      5556.6     362.4      5626.6
GR   475.0    5867.4
```

D/S Face Thousand Trails RV Park Entrance Bridge

```
ET            9.11       9.11                                  4925.      5075.      4921.      5112.
        D/S FACE THOUSAND TRAILS RV PARK ENTRANCE BRIDGE
X1   358.0    27.0       4970.5     5020.6     33.5       49.3       48.5
BT   27.0     3400.6     401.1      400.3      3474.7     402.4      402.4      3783.7     399.1      399.1
BT   4221.8   388.3      387.9      4380.1     380.0      377.9      4577.0     370.5      369.2      4679.7
BT   369.7    369.7      4761.2     365.1      364.6      4828.4     361.4      358.7      4919.6     357.7
BT   357.7    4952.2     354.7      354.6      4970.5     354.1      352.5      4970.6     354.1      352.5
BT   4995.4   353.5      352.5      5000.0     353.4      352.4      5006.6     353.5      352.5      5020.6
BT   353.7    352.7      5020.7     353.7      352.7      5038.8     353.9      352.9      5038.9     353.9
BT   352.9    5131.3     358.8      358.8      5425.1     358.4      358.2      5540.1     359.7      359.3
BT   5551.4   361.6      361.6      5600.8     361.8      361.8      5866.3     489.6      489.6      5891.9
BT   494.0    493.0
GR   400.3    3400.6     402.4      3474.7     399.1      3783.7     387.9      4221.8     377.9      4380.1
GR   369.2    4577.0     369.7      4679.7     364.6      4761.2     358.7      4828.4     357.7      4919.6
GR   354.6    4952.2     352.5      4970.5     346.8      4970.6     346.8      4995.4     346.8      5000.0
GR   346.8    5006.6     349.4      5020.6     352.7      5020.7     352.9      5038.8     352.9      5038.9
GR   358.8    5131.3     358.2      5425.1     359.3      5540.1     361.6      5551.4     361.8      5600.8
GR   489.6    5866.3     493.0      5891.9
```

1

U/S Face Thousand Trails RV Park Bridge

```
ET            9.11       7.11                                  4900.      5100.      4880.      5150.
        U/S FACE THOUSAND TRAILS RV PARK BRIDGE
X1   360.                                       20.        20.        20.
X2                                                                     1.

ET            9.1        7.1                                   4945.      5150.      4860.      5150.
NC   .08      .07        .08
X1   362.0    22.0       4970.4     5049.8     30.8       40.8       37.8
GR   401.4    3360.1     402.9      3480.3     399.3      3771.8     394.0      4119.3     378.0      4325.7
GR   374.0    4424.9     376.1      4461.1     374.0      4503.2     368.0      4713.3     359.6      4776.3
GR   357.5    4921.8     353.4      4940.2     351.9      4970.4     347.0      4990.2     347.0      5000.0
GR   347.0    5011.3     356.9      5049.8     358.9      5197.6     359.3      5522.1     361.0      5535.7
GR   362.1    5577.7     408.4      5677.1

ET            9.1        7.1                                   4850.      5150.      4800.      5150.
X1   364.0    32.0       4900.5     5032.9     245.7      375.9      120.9
GR   401.7    3079.8     397.4      3245.0     401.0      3303.9     400.7      3451.1     397.0      3533.3
GR   394.5    3700.1     394.6      3743.4     396.5      3777.4     395.3      3792.7     388.0      3817.0
GR   385.9    3937.1     386.1      4013.7     392.5      4123.0     394.6      4202.9     393.1      4298.5
GR   380.3    4382.0     369.0      4466.7     366.5      4582.6     360.3      4639.2     360.7      4750.8
GR   361.1    4836.2     359.2      4900.5     351.4      4936.2     347.9      4992.7     347.9      5000.0
GR   347.9    5006.0     358.7      5032.9     359.2      5164.1     359.3      5522.1     361.       5535.7
GR   362.1    5577.7     408.4      5677.1

NC   .1       .08

ET            9.1        7.1                                   4840.      5180.      4600.      5180.
X1   366.0    22.0       4934.3     5041.1     475.2      410.2      108.1
GR   408.0    4117.6     408.3      4134.7     402.0      4157.1     400.7      4186.2     398.2      4203.4
GR   397.0    4225.1     389.9      4269.9     378.8      4333.4     367.9      4397.6     363.4      4443.9
GR   361.4    4811.2     355.7      4934.3     353.9      4967.6     350.2      4993.0     350.1      5000.0
```

```
GR   350.1    5006.9    359.2     5041.1    360.4     5066.4    358.0     5338.7    359.3     5522.1
GR   361.     5535.7    408.4     5677.1

  Small Crossing in Thousand Trails RV Park

ET            9.11      7.11                                    4828.     5180.     4400.     5180.
        SMALL CROSSING IN THOUSAND TRAILS RV PARK
X1   370.0    28.0      4989.9    5011.1    206.6     189.3     127.2
BT   28.0     4110.9    429.8     414.4     4196.3    402.1     398.0     4203.2    399.8     397.4
BT   4211.1   396.4     393.6     4230.8    392.9     392.9     4244.5    390.6     385.7     4249.1
BT   390.5    386.9     4273.5    385.5     385.5     4289.9    383.7     379.6     4314.8    377.3
BT   377.3    4336.9    368.2     368.2     4351.3    365.1     365.1     4568.3    362.9     362.5
BT   4816.2   360.5     360.5     4942.8    356.1     356.1     4979.8    354.9     354.9     4989.9
BT   353.9    353.9     4990.1    353.7     353.2     5000.0    353.7     353.2     5010.9    353.7
BT   353.2    5011.1    353.7     353.7     5031.2    356.4     356.4     5192.3    358.4     358.4
BT   5362.7   358.8     358.8     5436.0    358.4     357.4     5522.1    359.3     359.3     5535.7
BT   361.     361.      5677.1    408.4     408.4
1
   09AUG96      09:28:04                                                                          PAGE   18

GR   414.4    4110.9    398.0     4196.3    397.4     4203.2    393.6     4211.1    392.9     4230.8
GR   385.7    4244.5    386.9     4249.1    385.5     4273.5    379.6     4289.9    377.3     4314.8
GR   368.2    4336.9    365.1     4351.3    362.5     4568.3    360.5     4816.2    356.1     4942.8
GR   354.9    4979.8    353.9     4989.9    350.7     4990.1    350.7     5000.0    350.7     5010.9
GR   353.7    5011.1    356.4     5031.2    358.4     5192.3    358.8     5362.7    357.4     5436.0
GR   359.3    5522.1    361.      5535.7    408.4     5677.1

ET            9.11      7.11                                    4828.     5180.     4400.     5180.
X1   371.                                    15.       15.       15.
X2                                                              1.

NC   .06

ET            9.1       7.1                                     4796.     5031.     4625.     5375.
X1   372.0    21.0      4966.7    5048.0    264.0     281.1     397.8
GR   397.3    4160.5    391.5     4197.7    389.4     4202.7    387.7     4230.6    383.9     4242.5
GR   378.6    4254.3    379.6     4267.0    375.9     4311.1    372.5     4329.9    371.8     4354.5
GR   364.4    4383.0    361.4     4634.4    359.6     4853.2    359.2     4966.7    353.0     4993.1
GR   353.0    5000.0    353.0     5008.6    372.7     5048.0    380.0     5070.1    385.6     5123.9
GR   400.5    5230.8

NC   .07      .1        .12

ET            9.1       7.1                                     4730.     5094.6    4730.     5270.
X1   374.0    18.0      4925.7    5046.5    396.9     377.2     417.8
GR   401.8    4371.2    385.9     4410.7    386.6     4427.0    376.9     4453.1    361.1     4479.2
GR   364.8    4558.8    364.2     4765.5    364.8     4925.7    361.3     4943.0    356.0     4995.1
GR   356.0    5000.0    356.0     5006.2    365.3     5046.5    368.6     5142.0    372.5     5235.4
GR   379.3    5296.1    383.1     5360.8    394.4     5438.7

ET            9.1       7.1                                     4780.     5075.     4780.     5220.
X1   376.0    21.0      4926.1    5108.9    52.6      71.1      183.7     .97
X3   10.
GR   383.8    4334.3    375.7     4403.6    366.7     4445.5    361.2     4471.7    364.0     4589.8
GR   365.2    4771.3    366.9     4926.1    362.6     4943.5    356.5     4989.3    356.5     5000.0
GR   356.5    5014.3    360.3     5047.9    368.3     5108.9    368.0     5121.0    364.1     5149.7
GR   365.2    5269.6    367.4     5319.8    376.9     5408.0    377.7     5470.6    385.7     5556.9
GR   391.4    5611.6

  D/S Face Uvas Road Bridge

ET            9.11      7.11                                    4790.     5100.     4790.     5210.
        D/S FACE UVAS ROAD BRIDGE
X1   378.0    32.0      4898.2    5085.0    32.3      12.5      34.5      .97
X2                                                                                  .97
X3   10.
BT   32.      4429.5    374.8     374.8     4462.7    360.7     360.7     4837.0    368.1     367.1
BT   4898.1   368.6     367.6     4898.2    368.6     367.6     4927.5    372.1     367.1     4964.
BT   372.9    367.1     4968.3    372.9     366.5     4971.     373.      367.1     4972.25   373.
BT   365.9    4973.     373.      365.1     4975.     373.      365.1     4975.75   373.      365.9
BT   4977.    373.1     367.1     5000.0    373.4     367.1     5023.0    373.3     367.1     5024.25
1
   09AUG96      09:28:04                                                                          PAGE   19

BT   373.3    365.9     5025.     373.3     365.1     5027.     373.3     365.1     5027.75   373.3
BT   365.9    5029.     373.3     367.1     5053.4    373.1     367.1     5085.     373.      367.1
BT   5121.6   369.8     367.1     5121.7    369.8     367.1     5151.9    368.9     367.6     5169.5
BT   368.2    365.7     5303.6    366.9     366.4     5373.5    370.7     368.8     5467.2    378.5
BT   378.5    5560.0    388.5     388.5     5612.1    391.7     391.7
GR   374.8    4429.5    360.7     4462.7    367.1     4837.0    367.6     4898.1    367.6     4898.2
GR   362.2    4927.5    358.8     4964.     358.8     4968.3    358.15    4971.     358.1     4972.25
GR   365.1    4973.     365.1     4975.     357.0     4975.75   356.6     4977.0    356.6     5000.0
GR   356.6    5023.0    356.9     5024.25   365.1     5025.     365.1     5027.     357.1     5027.75
GR   357.5    5029.     360.0     5053.4    367.1     5085.     367.1     5121.6    367.15    5121.7
GR   367.6    5151.9    365.7     5169.5    366.4     5303.6    368.8     5373.5    378.5     5467.2
GR   388.5    5560.0    391.7     5612.1

  U/S Face Uvas Road Bridge

ET            9.11      7.11                                    4765.0    5100.0    4765.     5235.
```

```
        U/S FACE UVAS ROAD BRIDGE
X1   380.0    40.0      4898.1    5121.7    24.5      24.5      24.5      .97
X2                                                                        .97
X3   10.
BT   40.0     4361.2    390.9     390.9     4396.8    389.1     389.1     4409.7    386.5     386.5
BT   4430.4   386.5     386.5     4472.3    372.3     372.3     4504.0    361.6     361.3     4592.2
BT   364.8    364.8     4878.0    368.1     364.0     4889.6    368.4     367.1     4898.1    368.6
BT   367.6    4898.2    368.6     367.1     4923.0    372.0     367.1     4926.     372.1     367.1
BT   4968.3   372.9     367.1     4971.     373.      367.1     4972.25   373.      365.9     4973.
BT   373.     365.1     4975.     373.      365.1     4975.75   373.      365.9     4977.     373.1
BT   367.1    5000.0    373.4     367.1     5023.0    373.3     367.1     5024.25   373.3     365.9
BT   5025.    373.3     365.1     5027.     373.3     365.1     5027.75   373.3     365.9     5029.
BT   373.3    367.1     5058.3    373.1     367.1     5072.     373.      367.1     5075.     373.
BT   367.1    5121.6    369.8     367.1     5121.7    369.8     367.3     5151.9    368.9     367.6
BT   5169.5   368.2     365.7     5303.6    366.9     366.9     5389.5    370.7     369.9     5467.2
BT   377.0    376.9     5538.9    384.6     384.1     5626.2    391.3     389.0     5634.7    391.9
BT   390.4
GR   390.9    4361.2    389.1     4396.8    386.5     4409.7    386.5     4430.4    372.3     4472.3
GR   361.3    4504.0    364.8     4592.2    364.0     4878.0    367.1     4889.6    367.6     4898.1
GR   367.1    4898.2    367.1     4923.0    361.9     4926.     359.5     4968.3    357.1     4971.
GR   357.1    4972.25   365.1     4973.     365.1     4975.     357.1     4975.75   357.1     4977.0
GR   357.1    5000.0    357.1     5023.0    357.1     5024.25   365.1     5025.     365.1     5027.
GR   357.1    5027.75   357.1     5029.     360.5     5058.3    364.1     5072.     367.1     5075.
GR   367.1    5121.6    367.3     5121.7    367.6     5151.9    365.7     5169.5    366.9     5303.6
GR   369.9    5389.5    376.9     5467.2    384.1     5538.9    389.0     5626.2    390.4     5634.7

NC   .06      .1        .12

ET                      7.1                                     4560.0    4942.81
X1   382.0    33.0      4856.0    5090.7    32.6      66.2      89.9      .64
X3   10.
GR   405.2    4215.5    393.6     4238.5    393.6     4252.7    401.0     4297.7    401.1     4318.2
GR   393.0    4359.4    386.6     4381.5    386.6     4402.2    373.8     4440.8    362.1     4485.9
GR   365.0    4683.5    364.9     4831.7    368.2     4843.1    367.4     4856.0    362.2     4876.8
GR   361.2    4965.0    357.1     4989.2    357.1     5000.0    357.1     5009.0    358.2     5031.2
GR   363.8    5064.8    368.4     5090.7    367.8     5106.7    363.3     5135.7    362.4     5160.5
GR   364.8    5176.1    365.1     5233.2    367.0     5332.6    378.9     5394.7    379.9     5465.1
1
   09AUG96      09:28:04                                                                          PAGE   20


GR   382.2    5475.5    388.0     5554.0    395.4     5622.0

NC                                .1        .3

ET                      7.1                                     4715.     5135.
X1   384.0    20.0      4889.4    5036.3    707.5     693.6     518.7
GR   400.3    4408.6    399.0     4419.7    386.9     4449.0    372.0     4510.4    370.7     4551.0
GR   369.5    4703.2    365.3     4734.9    364.8     4889.4    363.2     4961.7    358.3     4986.7
GR   358.3    5000.0    358.3     5010.3    369.7     5036.3    367.8     5100.1    368.6     5131.8
GR   378.4    5168.2    379.4     5208.3    389.9     5261.9    392.2     5281.2    425.0     5383.0


ET                      7.1                                     4725.0    5025.5
X1   386.0    19.0      4896.3    5039.6    491.0     655.7     546.7
GR   415.0    4239.4    396.3     4285.2    393.9     4312.5    384.5     4361.6    378.7     4511.3
GR   369.7    4572.1    368.0     4702.0    364.8     4733.6    364.8     4751.9    368.6     4779.1
GR   368.6    4896.3    366.1     4960.9    359.6     4996.3    359.6     5000.0    359.6     5005.4
GR   381.8    5039.6    390.3     5061.5    390.0     5094.2    423.1     5138.2


ET                      7.1                                     4775.     5047.54
X1   388.0    20.0      4845.4    5076.3    452.5     353.7     460.5
GR   420.4    4045.2    402.6     4098.9    402.4     4115.6    405.0     4168.4    403.3     4198.6
GR   402.4    4203.4    402.4     4219.1    385.6     4265.0    380.2     4299.8    379.1     4425.8
GR   376.1    4504.2    371.1     4704.9    367.7     4845.4    364.4     4956.7    362.5     4987.1
GR   362.5    5000.0    362.5     5014.2    384.0     5076.3    383.9     5113.0    439.8     5185.3

NC            .05       .08

ET                      7.1                                     4806.     5056.
X1   390.0    26.0      4806.2    5056.3    539.4     466.2     501.4
GR   406.3    4279.5    396.3     4300.9    382.9     4338.6    380.6     4405.8    378.6     4483.1
GR   373.2    4507.4    373.2     4519.2    375.5     4576.1    377.4     4685.3    376.6     4777.9
GR   374.3    4806.2    370.5     4821.9    371.6     4875.8    372.0     4977.6    369.6     4996.8
GR   369.6    5000.0    369.6     5005.9    373.0     5033.6    376.2     5056.3    376.0     5112.1
GR   378.6    5189.1    383.8     5231.6    383.1     5262.0    386.4     5278.0    386.5     5298.3
GR   404.6    5367.5


ET            9.1       7.1                                     4850.     5150.     4428.6    5239.6
X1   392.0    27.0      4897.1    5064.3    445.2     519.3     576.4
GR   416.6    4428.6    399.9     4475.2    389.1     4522.6    384.7     4674.3    383.4     4796.2
GR   380.0    4835.8    376.6     4846.3    376.6     4868.7    379.2     4897.1    378.4     4919.9
GR   375.9    4945.0    373.6     4991.6    373.6     5000.0    373.6     5012.0    375.1     5033.7
GR   377.5    5064.3    379.5     5146.0    382.9     5239.6    382.4     5299.9    380.7     5381.8
GR   379.2    5415.2    385.3     5429.4    387.1     5526.1    388.8     5590.1    395.4     5635.5
GR   395.5    5683.1    415.1     5758.1

NC   .05

ET            9.1       7.1                                     4862.1    5076.88   4862.1    5639.
1
   09AUG96      09:28:04                                                                          PAGE   21


X1   394.0    30.0      4894.4    5079.4    512.8     459.8     526.6
```

```
 GR   424.0    4192.4    423.2     4201.5    404.9     4233.4    404.5     4242.9    396.3     4270.3
 GR   388.7    4470.0    386.1     4569.1    379.4     4596.5    379.4     4603.0    380.7     4626.4
 GR   381.0    4679.8    384.3     4699.8    384.9     4862.1    383.1     4894.4    378.7     4920.1
 GR   377.6    4964.8    376.5     4993.2    376.5     5000.0    376.5     5008.6    378.6     5042.6
 GR   386.1    5079.4    388.6     5157.0    389.3     5225.5    396.3     5357.8    404.7     5476.0
 GR   407.9    5501.4    408.7     5531.4    413.1     5551.9    418.5     5585.0    424.4     5639.0


 ET            9.1       7.1                                     4837.      5059.75    4799.      5529.7
 X1   396.0    27.0      4837.0    5073.4    494.4     498.0     527.1
 GR   440.5    4016.9    425.3     4088.3    422.3     4124.5    420.8     4159.0    414.1     4212.7
 GR   405.6    4317.4    392.0     4447.6    388.7     4530.3    388.0     4603.7    386.6     4627.5
 GR   388.5    4702.2    388.9     4799.0    384.7     4818.7    384.5     4837.0    381.2     4852.3
 GR   381.2    4971.0    379.0     4992.3    379.0     5000.0    379.0     5004.8    385.3     5043.9
 GR   392.1    5073.4    395.5     5124.1    400.4     5181.8    412.7     5337.8    418.3     5409.7
 GR   422.4    5470.7    429.1     5529.7

 NC            .07

 ET                      7.1                                     4960.      5077.
 X1   398.0    23.0      4960.6    5077.3    525.5     560.7     512.5
 GR   462.9    4296.6    418.5     4408.9    407.2     4429.9    406.3     4444.8    399.0     4476.7
 GR   396.4    4616.0    392.1     4800.4    391.7     4960.6    380.5     4987.6    380.5     5000.0
 GR   380.5    5014.6    382.5     5023.4    383.9     5046.7    388.7     5077.3    395.0     5194.9
 GR   402.7    5265.5    412.0     5326.3    424.2     5385.5    435.7     5458.5    434.1     5486.4
 GR   437.1    5492.6    439.0     5520.3    473.9     5619.4


 ET                      7.1                                     4871.      5042.
 X1   400.0    29.0      4871.4    5041.7    395.2     400.1     467.5
 GR   483.4    4228.8    439.3     4329.2    425.1     4427.0    424.4     4441.3    415.6     4488.3
 GR   411.2    4525.9    410.0     4580.3    403.0     4665.3    396.3     4737.0    394.4     4808.1
 GR   394.1    4871.4    386.4     4905.8    382.8     4984.0    381.2     4991.3    381.2     5000.0
 GR   381.2    5007.6    389.2     5022.2    393.9     5041.7    399.4     5163.1    406.2     5201.7
 GR   413.1    5258.2    417.1     5340.6    424.4     5451.2    430.1     5541.7    438.6     5647.0
 GR   461.6    5691.8    463.4     5730.9    467.3     5770.1    474.9     5786.9


 ET                      7.1                                     4922.      5059.01
 X1   402.0    28.0      4900.6    5069.3    408.6     373.0     536.2
 GR   476.7    4463.8    437.9     4579.5    436.8     4594.0    427.9     4618.3    426.6     4636.0
 GR   416.1    4651.9    415.0     4667.0    401.0     4694.2    396.7     4713.6    396.7     4721.0
 GR   402.4    4743.2    410.0     4756.2    410.8     4772.5    416.4     4783.8    415.8     4820.0
 GR   414.7    4865.9    409.0     4900.6    392.1     4933.8    387.7     4970.0    387.7     5000.0
 GR   387.7    5017.9    391.4     5041.2    401.9     5069.3    405.8     5143.2    408.6     5324.3
 GR   413.2    5481.5    449.6     5616.9    492.2     5729.8
1
   09AUG96      09:28:04                                                                          PAGE   22

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=     .300 CEHV=     .500
 *SECNO 200.000

 3470 ENCROACHMENT STATIONS=     4830.0    5250.0  TYPE=      1  TARGET=      420.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA =       247.20 ELREA=       241.40

        SANTA CLARA AREA LEVEE EVALUATION STUDY
        UPPER UVAS CREEK FLOODWAY
        FINAL FLOODWAY RUN; ADJUSTED TO SMOOTH FLOODWAY AND
        MINIMIZE HAZARDOUS VELOCITY INCREASES

        PREPARED SEPTEMBER 1991 BY
        NOLTE AND ASSOC.  (CDA/TRW)
        60 S. MARKET ST., SUITE 600
        SAN JOSE, CA 95113

        STARTING WSEL AND 100-YEAR FLOW WERE TAKEN FROM SCVWD LOMR
          PREPARED DECEMBER 1988 [STA 309+50]

        X-SECTIONS TAKEN LEFT TO RIGHT LOOKING D/S
   200.000     11.71    241.31       .00       .00    242.84      1.53       .00       .00    247.20
   13550.0       .0   13550.0        .0        .0    1365.6        .0        .0        .0    241.40
       .00       .00      9.92       .00      .000      .040      .000      .000    229.60   4958.07
  .003786        0.        0.        0.         0         0         0       .00    146.42   5104.49


 *SECNO 202.000

 3470 ENCROACHMENT STATIONS=     4641.1    4782.6  TYPE=      1  TARGET=      141.500

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA =    100000.00 ELREA=    100000.00

   202.000     12.44    242.94       .00       .00    244.42      1.49      1.57       .01 100000.00
   13550.0       .0   13550.0        .0        .0    1384.1        .0      13.6       1.4 100000.00
       .01       .00      9.79       .00      .000      .040      .000      .000    230.50   4648.46
  .003531      203.      430.      251.         3         0         0       .00    134.14   4782.60
```

```
1
   09AUG96      09:28:04                                                                                                PAGE   23

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 204.000

3470 ENCROACHMENT STATIONS=     4648.9    4816.9  TYPE=      1  TARGET=      168.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       252.60 ELREA=       246.10

        D/S FACE HECKER PASS ROAD (HIGHWAY 152)
   204.000     12.70    243.00       .00       .00    244.65      1.65       .15       .08    252.60
   13550.0        .0   13550.0        .0        .0    1314.6        .0      14.8       1.5    246.10
       .01       .00     10.31       .00      .000      .040      .000      .000    230.30   4672.94
   .003879       67.       41.       60.         2         0         0       .00    134.70   4807.64


SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON SB CARD NOT SPECIFIED
SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05       1.51       2.60        .00     118.00       2.10    2800.00       1.30     230.30     230.30

*SECNO 210.000
BTCARD, BRIDGE STENCL=    4487.39   STENCR=    4611.25
CLASS A LOW FLOW

3420 BRIDGE W.S.=     242.96 BRIDGE VELOCITY=       8.09     CALCULATED CHANNEL AREA=      1675.

 EGPRS      EGLWC       H3        QWEIR      QLOW       BAREA    TRAPEZOID      ELLC      ELTRD      WEIRLN
                                                                    AREA
       .00    244.75       .09        0.    13550.     2800.     2688.      249.40    250.00        0.


3470 ENCROACHMENT STATIONS=     4648.5    4828.0  TYPE=      1  TARGET=      179.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       251.80 ELREA=       251.60

        U/S FACE HECKER PASS ROAD BRIDGE
   210.000     12.70    243.10       .00       .00    244.75      1.65       .09       .00    251.80
   13550.0        .0   13550.0        .0        .0    1315.9        .0      16.7       1.7    251.60
       .02       .00     10.30       .00      .000      .040      .000      .000    230.40   4678.63
   .003766       76.       63.       47.         0         0         0       .00    131.05   4809.67


*SECNO 212.000
1
   09AUG96      09:28:04                                                                                                PAGE   24

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .56

3470 ENCROACHMENT STATIONS=     4648.5    4959.0  TYPE=      1  TARGET=      310.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       248.70 ELREA=       250.30

   212.000     12.75    243.55       .00       .00    245.05      1.50       .26       .04    248.70
   13550.0        .0   13550.0        .0        .0    1379.0        .0      18.0       1.8    250.30
       .02       .00      9.83       .00      .000      .075      .000      .000    230.80   4716.74
   .011825       60.       42.       40.         2         0         0       .00    135.26   4852.01


CCHV=     .100 CEHV=     .300
*SECNO 214.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.96


3470 ENCROACHMENT STATIONS=     4560.0    5220.0  TYPE=      1  TARGET=      660.000
   214.000     12.91    245.91       .00       .00    246.04       .12       .85       .14    238.40
   13550.0    8500.7    4678.7     370.6    2840.0    1872.5     207.7      52.5       5.8    241.80
       .06      2.99      2.50      1.78      .060      .075      .050      .000    233.00   4613.63
   .000753      593.      370.      558.         3         0         0       .00    577.45   5191.08


*SECNO 216.000
```

```
3470 ENCROACHMENT STATIONS=     4370.0    5224.3  TYPE=      1  TARGET=      854.300
   216.000     12.13    246.13       .00       .00    246.23       .11       .19       .00    236.80
   13550.0    6793.0    6400.3     356.8    2615.7    2379.4     228.3      82.0       9.8    243.30
       .09      2.60      2.69      1.56      .060      .075      .050      .000    234.00   4407.79
   .000788      252.      254.      268.         2         0         0       .00    797.85   5205.64

*SECNO 218.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .32

1
   09AUG96      09:28:04                                                                                    PAGE   25

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

3470 ENCROACHMENT STATIONS=     4125.0    5500.0  TYPE=      1  TARGET=     1375.000
   218.000     10.33    246.33       .00       .00    246.93       .60       .55       .15    247.80
   13550.0        .0   13550.0        .0        .0    2184.7        .0     107.9      13.7    249.90
       .10       .00      6.20       .00      .000      .075      .000      .000    236.00   4788.57
   .007463      312.      303.      252.         1         0         0       .00    314.74   5103.31

*SECNO 220.000

3265 DIVIDED FLOW

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.56

3470 ENCROACHMENT STATIONS=     3820.0    5450.0  TYPE=      1  TARGET=     1630.000
   220.000     11.68    247.78       .00       .00    247.91       .13       .94       .05    248.50
   13550.0    6102.3    7447.7        .0    1866.4    2827.7        .0     139.2      19.4    251.40
       .14      3.27      2.63       .00      .060      .075      .000      .000    236.10   4050.22
   .001139      386.      401.      446.         2         0         0       .00    936.17   5278.29

*SECNO 222.000

3265 DIVIDED FLOW

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .49

3470 ENCROACHMENT STATIONS=     4129.3    6000.0  TYPE=      1  TARGET=     1870.700
        BODFISH CREEK CONFLUENCE
   222.000      8.86    248.36       .00       .00    248.55       .19       .62       .02    244.20
   10909.0    3879.1    6659.9     370.0    1133.8    1810.9     187.6     173.1      27.2    247.50
       .17      3.42      3.68      1.97      .060      .075      .060      .000    239.50   4407.62
   .003039      339.      400.      415.         2         0         0       .00    930.34   5511.71

*SECNO 224.000

3265 DIVIDED FLOW

1
   09AUG96      09:28:04                                                                                    PAGE   26

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

   224.000      9.35    249.75       .00       .00    250.05       .30      1.46       .03    249.50
   10909.0     171.7   10728.7       8.6     132.9    2424.5      18.4     198.6      34.6    249.50
       .19      1.29      4.43       .47      .060      .075      .060      .000    240.40   4690.07
   .004705      406.      390.      307.         2         0         0       .00    743.83   5483.18

*SECNO 226.000

3470 ENCROACHMENT STATIONS=     4688.0    5450.0  TYPE=      1  TARGET=      762.000
   226.000      9.09    251.69       .00       .00    251.89       .20      1.83       .01    245.60
   10909.0    4372.7    2149.0    4387.4    1225.3     548.7    1298.4     235.2      43.8    246.80
       .24      3.57      3.92      3.38      .060      .075      .060      .000    242.60   4692.83
   .002416      596.      528.      612.         2         0         0       .00    654.16   5346.99

*SECNO 228.000
   228.000      8.63    253.13       .00       .00    253.40       .27      1.49       .02    252.00
   10909.0    2447.6    2740.1    5721.3     713.7     581.1    1358.7     265.0      51.4    249.00
       .27      3.43      4.72      4.21      .060      .075      .060      .000    244.50   4618.73
   .004749      464.      426.      457.         2         0         0       .00    785.04   5403.76

*SECNO 230.000
```

```
3470 ENCROACHMENT STATIONS=     4227.0    6715.1  TYPE=      1  TARGET=     2488.100
   230.000      8.00    255.40       .00       .00    255.77       .37      2.34       .03    255.10
   10909.0    2923.2    4888.5    3097.3     828.5     907.2     597.9     286.5      59.1    254.00
       .29      3.53      5.39      5.18      .060      .075      .060      .000    247.40   4290.27
   .008451      354.      361.      405.         3         0         0       .00   1030.48   5320.76


*SECNO 232.000
   232.000      9.31    256.81       .00       .00    257.11       .30      1.33       .01    254.20
   10909.0    3251.5    4109.2    3548.3    1053.5     803.5     797.0     297.4      63.0    254.40
       .30      3.09      5.11      4.45      .060      .075      .060      .000    247.50   4459.67
   .005660      160.      210.      204.         2         0         0       .00    883.72   5343.39


*SECNO 234.000
   234.000     10.72    258.32       .00       .00    258.67       .35      1.55       .02    255.20
   10909.0     863.5    5674.0    4371.5     323.7    1155.7     889.2     314.8      68.5    253.70
       .32      2.67      4.91      4.92      .060      .075      .060      .000    247.60   4798.72
   .005059      414.      305.      208.         3         0         0       .00    575.38   5374.09


1
   09AUG96      09:28:04                                                                          PAGE   27

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 236.000
   236.000     11.77    260.27       .00       .00    260.61       .34      1.94       .00    257.30
   10909.0    2484.8    7982.7     441.5     528.8    1656.1     247.9     333.2      76.0    257.50
       .34      4.70      4.82      1.78      .060      .100      .060      .000    248.50   4726.83
   .006779      310.      306.      423.         2         0         0       .00   1163.45   5890.27


*SECNO 238.000
   238.000     10.51    262.11       .00       .00    262.48       .37      1.86       .01    261.80
   10909.0       3.2    8927.3    1978.5       4.6    1680.9     866.9     347.1      83.3    260.80
       .35       .70      5.31      2.28      .060      .100      .060      .000    251.60   4797.65
   .009333      238.      228.      286.         2         0         0       .00   1199.09   5996.74


*SECNO 240.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.98

   240.000     10.90    263.40       .00       .00    263.51       .11      1.01       .03    263.50
   10909.0    8901.4    1369.0     638.7    3049.1    1012.3     703.6     383.9      97.4    262.00
       .40      2.92      1.35       .91      .060      .100      .060      .000    252.50   4550.52
   .001049      398.      422.      548.         3         0         0       .00   1287.53   5856.59


*SECNO 242.000
   242.000      9.48    263.88       .00       .00    263.96       .09       .44       .00    259.40
   10909.0    8392.7    1325.1    1191.3    3267.1    1056.1     799.1     441.1     109.8    261.00
       .46      2.57      1.25      1.49      .060      .100      .060      .000    254.40   4482.52
   .000726      527.      510.      400.         3         0         0       .00    979.04   5461.55


*SECNO 244.000
   244.000      9.30    264.20       .00       .00    264.31       .11       .34       .01    263.60
   10909.0    8637.7     839.0    1432.3    2968.6     742.6    1058.0     489.8     119.3    261.40
       .51      2.91      1.13      1.35      .060      .100      .060      .000    254.90   4466.25
   .000827      459.      435.      319.         2         0         0       .00   1101.64   5567.89


*SECNO 246.000
1
   09AUG96      09:28:04                                                                          PAGE   28

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   246.000      4.76    265.36    265.36       .00    266.30       .94      1.01       .25    265.10
   10909.0    7531.7    3377.3        .0     849.9     762.3        .0     525.3     130.6    265.90
       .52      8.86      4.43       .00      .060      .100      .000      .000    260.60   4493.84
   .023951      376.      487.      873.        20         8         0       .00    725.41   5219.25


*SECNO 250.000
```

```
3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.11

   250.000      7.78    269.18       .00       .00    269.31       .13      2.93       .08    268.90
   10909.0    5018.4    1558.9    4331.7    1595.4     617.0    1645.9     556.0     141.5    266.80
       .57      3.15      2.53      2.63      .060      .100      .060      .000    261.40   4522.83
   .002475      578.      546.      310.         7         0         0       .00   1309.22   5832.05

*SECNO 252.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .62

   252.000      9.14    271.14       .00       .00    271.38       .23      2.04       .03    270.70
   10909.0       2.4    2389.9    8516.7       3.3     600.4    2224.1     597.6     157.3    267.30
       .61       .72      3.98      3.83      .060      .100      .060      .000    262.00   4927.33
   .006350      548.      511.      551.         4         0         0       .00   1202.24   6129.57

*SECNO 254.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.51

   254.000      8.42    273.52       .00       .00    273.62       .10      2.23       .01    275.40
   10909.0        .0    1959.6    8949.4        .0     778.5    3418.8     642.4     175.6    269.50
       .67       .00      2.52      2.62      .000      .100      .060      .000    265.10   4961.79
   .002779      707.      498.      569.         2         0         0       .00   1630.90   6592.69
```



```
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

*SECNO 256.000
   256.000      7.72    274.82       .00       .00    274.94       .12      1.31       .00    272.00
   10909.0    2009.2    2938.0    5961.8     690.0     985.7    2332.1     679.2     189.6    271.60
       .71      2.91      2.98      2.56      .060      .100      .060      .000    267.10   4639.78
   .004045      610.      497.      333.         3         0         0       .00   1646.56   6286.34

*SECNO 258.000
   258.000      7.56    277.16       .00       .00    277.25       .09      2.31       .00    275.20
   10909.0    2304.9    1938.5    6665.6    1110.3     917.6    2586.7     749.9     217.9    273.00
       .80      2.08      2.11      2.58      .060      .100      .060      .000    269.60   4381.72
   .002620      452.      531.      882.         2         0         0       .00   1691.66   6073.38

*SECNO 260.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=     4350.0    6640.0  TYPE=      1  TARGET=     2290.000
        SMALL RIVER CROSSING (NO BRIDGE)
   260.000      6.06    277.86       .00       .00    277.98       .11       .72       .01    275.70
   10909.0    3457.6    3057.3    4394.1    1170.3    1162.1    1706.5     772.0     226.2    279.70
       .82      2.95      2.63      2.57      .060      .100      .060      .000    271.80   4425.58
   .004095      233.      209.      223.         2         0         0       .00   1559.91   6037.00

FLOW DISTRIBUTION FOR SECNO=    260.00          CWSEL=    277.86

STA=    4426.    4480.    4856.    4895.    5163.    5208.    5515.    6023.    6037.
  PER Q=      1.5     28.0      2.2     28.0       .1     10.9     28.8       .4
   AREA=     80.2   1001.5     88.5   1162.1      9.4    525.4   1150.7     20.9
    VEL=      2.1      3.0      2.7      2.6      1.5      2.3      2.7      2.0
  DEPTH=      1.5      2.7      2.3      4.6       .2      1.7      2.3      1.5

*SECNO 262.000

3470 ENCROACHMENT STATIONS=     4450.0    6150.0  TYPE=      1  TARGET=     1700.000
   262.000      6.99    279.89       .00       .00    280.03       .14      2.04       .01    278.30
   10909.0    4099.3    1444.5    5365.2    1176.3     665.6    1908.5     817.2     243.6    279.60
       .87      3.48      2.17      2.81      .060      .100      .060      .000    272.90   4450.00
   .003984      503.      523.      499.         2         0         0       .00   1443.51   5893.51
```



```
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

FLOW DISTRIBUTION FOR SECNO=    262.00          CWSEL=    279.89
```

```
STA=    4450.    4492.    4504.    4543.    4630.    4857.    5045.    5110.    5119.    5555.    5881.    5894.
  PER Q=      6.3      4.3      9.0      7.7     10.3     13.2       .1       .2     28.6     20.0       .3
   AREA=    175.2     83.4    207.5    257.6    452.6    665.6     12.4     13.7   1084.9    781.8     15.8
    VEL=      3.9      5.7      4.7      3.2      2.5      2.2       .5      1.9      2.9      2.8      1.8
  DEPTH=      4.2      6.9      5.3      3.0      2.0      3.5       .2      1.4      2.5      2.4      1.3

CCHV=     .300 CEHV=     .500
*SECNO 264.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .69


3470 ENCROACHMENT STATIONS=     4500.0    5630.0  TYPE=      1  TARGET=     1130.000
   264.000      7.63    281.93       .00       .00    282.18       .25      2.09       .05    280.90
   10909.0    3414.1    3212.2    4282.7     805.7     851.9    1069.3     845.0     254.0    282.90
       .89      4.24      3.77      4.01      .060      .100      .060      .000    274.30   4500.00
   .008476      395.      483.      303.         1         0         0       .00   1087.57   5630.00


FLOW DISTRIBUTION FOR SECNO=    264.00          CWSEL=    281.93

STA=    4500.    4524.    4557.    4892.    5090.    5134.    5162.    5180.    5220.    5630.
  PER Q=      9.5      7.6     14.2     29.4       .8      6.2      4.5      6.1     21.7
   AREA=    154.9    139.9    510.9    851.9     25.7    115.9     79.2    132.0    716.4
    VEL=      6.7      5.9      3.0      3.8      3.4      5.9      6.1      5.0      3.3
  DEPTH=      6.4      4.2      1.5      4.6       .6      4.1      4.4      3.3      1.7

*SECNO 266.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     4620.0    5320.0  TYPE=      1  TARGET=      700.000
   266.000      9.69    284.99       .00       .00    285.26       .27      3.07       .01    281.70
   10909.0    5173.1    3410.5    2325.4    1113.6     889.8     696.2     875.0     263.9    282.30
       .92      4.65      3.83      3.34      .060      .100      .060      .000    275.30   4620.00
   .005021      429.      505.      518.         2         0         0       .00    694.21   5320.00


1
   09AUG96      09:28:04                                                                                    PAGE   31

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


FLOW DISTRIBUTION FOR SECNO=    266.00          CWSEL=    284.99

STA=    4620.    4676.    4791.    4819.    4832.    4870.    4908.    5035.    5101.    5117.    5320.
  PER Q=      4.1     12.1      8.7      6.6     11.2      4.7     31.3      1.7       .4     19.2
   AREA=    140.9    354.1    167.6    103.1    217.1    130.8    889.8     88.4     16.5    591.2
    VEL=      3.2      3.7      5.7      7.0      5.6      4.0      3.8      2.1      2.4      3.5
  DEPTH=      2.5      3.1      5.8      8.0      5.8      3.4      7.0      1.3      1.0      2.9

*SECNO 268.000

3470 ENCROACHMENT STATIONS=     4650.0    5130.0  TYPE=      1  TARGET=      480.000
   268.000     12.10    287.70       .00       .00    287.98       .28      2.71       .01    279.40
   10909.0    6111.3    3750.7    1047.0    1287.1    1033.7     316.8     921.3     275.2    283.50
       .97      4.75      3.63      3.31      .060      .100      .060      .000    275.60   4739.02
   .002939      575.      517.     1632.         4         0         0       .00    390.98   5130.00


*SECNO 270.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .60


3470 ENCROACHMENT STATIONS=     4712.7    4947.6  TYPE=      1  TARGET=      234.900
   270.000     13.15    289.05       .00       .00    289.67       .62      1.52       .17    280.40
   10909.0     555.6   10353.4        .0      98.3    1631.7        .0     939.7     278.3 100000.00
       .99      5.65      6.35       .00      .060      .100      .000      .000    275.90   4780.05
   .008097      396.      209.     1579.         2         0         0       .00    167.55   4947.60


*SECNO 272.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.97


3470 ENCROACHMENT STATIONS=     4765.0    4996.4  TYPE=      1  TARGET=      231.400

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       291.70 ELREA=       290.10

        D/S FACE WATSONVILLE ROAD BRIDGE
   272.000     13.53    289.53       .00       .00    289.89       .36       .15       .08    291.70
   10362.0        .0   10362.0        .0        .0    2144.9        .0     941.6     278.5    290.10
       .99       .00      4.83       .00      .000      .060      .000      .000    276.00   4771.74
   .001891       49.       43.       59.         2         0         0       .00    222.49   4994.23
```

```
1
   09AUG96      09:28:04                                                                                                    PAGE   32

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON SB CARD NOT SPECIFIED
SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.25       1.61       2.60        .00     166.20       4.40    2454.00       1.70     276.00     276.00

*SECNO 280.000
BTCARD, BRIDGE STENCL=    4706.77   STENCR=    4906.26
PRESSURE FLOW


 EGPRS      EGLWC      H3         QWEIR      QPR        BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                     AREA
    289.98     289.89       .02         0.     10362.      2454.      2391.      289.00     292.10         0.


3470 ENCROACHMENT STATIONS=     4747.3    4976.6  TYPE=      1  TARGET=      229.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       294.00 ELREA=    100000.00

        U/S FACE WATSONVILLE ROAD BRIDGE
   280.000     13.65    289.65       .00        .00    289.98       .32        .08        .00    294.00
   10362.0        .0   10362.0        .0         .0    2278.0        .0      944.6     278.8 100000.00
       .99       .00      4.55       .00       .000      .060      .000       .000    276.00   4761.17
   .001508       77.       58.      107.          2         0         0        .00    215.43   4976.60


*SECNO 282.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .64


3470 ENCROACHMENT STATIONS=     4658.6    5114.5  TYPE=      1  TARGET=      455.900
   282.000     13.74    289.84       .00        .00    290.12       .28        .14        .01    294.70
   10362.0        .0   10176.4     185.6         .0    2373.3      98.6      947.8      279.1    288.60
      1.00       .00      4.29      1.88       .000      .100      .050       .000    276.10   4797.50
   .003677       43.       60.       44.          2         0         0        .00    317.00   5114.50


CCHV=     .100 CEHV=     .300
*SECNO 284.000
1
   09AUG96      09:28:04                                                                                                    PAGE   33

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .58


3470 ENCROACHMENT STATIONS=     4650.0    6055.0  TYPE=      1  TARGET=     1405.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       290.80 ELREA=       293.00

   284.000     15.32    292.32       .00        .00    293.12       .80       2.84        .16    290.80
   10362.0      22.5   10339.5        .0       10.5    1434.6        .0      969.3      281.4    293.00
      1.01      2.14      7.21       .00       .060      .100      .000       .000    277.00   4911.44
   .010893      266.      485.      214.          3         0         0        .00    152.74   5064.18


*SECNO 286.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       307.00 ELREA=       309.80

        LITTLE ARTHUR CREEK CONFLUENCE
   286.000     18.92    298.32       .00        .00    299.41      1.08       6.20        .08    307.00
    8497.0        .0    8497.0        .0         .0    1016.6        .0      983.7      282.8    309.80
      1.03       .00      8.36       .00       .000      .100      .000       .000    279.40   4963.52
   .014176      410.      508.      518.          3         0         0        .00     85.53   5049.05


*SECNO 288.000

3301 HV CHANGED MORE THAN HVINS
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.91

   288.000     17.54    300.34       .00       .00    300.45       .11       .94       .10    291.80
    8497.0    1443.6    4597.7    2455.7     607.6    1523.8    1313.3    1004.2     286.5    296.50
      1.07      2.38      3.02      1.87      .050      .080      .050      .000    282.80   4809.81
   .000925      381.      400.      411.         4         0         0       .00    707.34   5517.15


*SECNO 290.000
   290.000     17.79    300.79       .00       .00    300.95       .16       .49       .02    296.40
    8497.0    1047.7    6224.5    1224.7     554.1    1739.2     563.0    1034.5     293.0    296.80
      1.11      1.89      3.58      2.18      .050      .080      .050      .000    283.00   4643.42
   .001485      425.      442.      375.         3         0         0       .00    704.83   5348.25


1
   09AUG96      09:28:04                                                                          PAGE   34

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 292.000
   292.000     15.83    301.43       .00       .00    301.55       .12       .59       .00    300.50
    8497.0    2432.1    6064.9        .0     974.6    2063.0        .0    1061.7     298.6    307.90
      1.15      2.50      2.94       .00      .050      .080      .000      .000    285.60   4463.61
   .001394      317.      444.      354.         2         0         0       .00    653.19   5116.80


*SECNO 294.000

3265 DIVIDED FLOW

   294.000     15.87    302.27       .00       .00    302.54       .27       .95       .04    296.60
    8497.0    2007.2    6485.0       4.8     779.5    1416.2       3.8    1091.7     305.0    300.70
      1.19      2.57      4.58      1.26      .050      .080      .050      .000    286.40   4495.25
   .002633      417.      539.      401.         2         0         0       .00    585.06   5083.89


*SECNO 296.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .53

   296.000     15.10    304.10       .00       .00    304.87       .77      2.18       .15    301.90
    8497.0    2033.9    6463.1        .0     525.4     831.7        .0    1110.8     310.4    316.70
      1.21      3.87      7.77       .00      .050      .080      .000      .000    289.00   4530.04
   .009542      402.      506.      468.         3         0         0       .00    518.79   5049.96


*SECNO 298.000
   298.000     14.00    308.00       .00       .00    308.46       .46      3.56       .03    306.30
    8497.0    1602.8    6894.2        .0     544.9    1176.4        .0    1127.4     315.4    314.80
      1.23      2.94      5.86       .00      .050      .080      .000      .000    294.00   4557.23
   .005798      401.      509.      309.         2         0         0       .00    510.22   5067.44


*SECNO 300.000
   300.000     15.59    310.89       .00       .00    311.48       .59      2.98       .04    310.20
    8497.0    1544.8    6952.2        .0     524.2    1043.4        .0    1146.1     321.0    322.20
      1.25      2.95      6.66       .00      .050      .080      .000      .000    295.30   4575.82
   .006209      491.      499.      417.         2         0         0       .00    478.71   5054.53


1
   09AUG96      09:28:04                                                                          PAGE   35

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 302.000
   302.000     16.16    314.46       .00       .00    315.07       .60      3.58       .00    311.00
    8497.0    2339.3    6157.7        .0     599.2     890.9        .0    1164.9     327.4    317.60
      1.28      3.90      6.91       .00      .050      .080      .000      .000    298.30   4509.85
   .007300      549.      528.      617.         2         0         0       .00    549.66   5059.52


*SECNO 304.000

3265 DIVIDED FLOW

   304.000     14.95    318.25       .00       .00    318.68       .44      3.60       .02    316.10
    8497.0    3531.6    4965.4        .0     922.9     808.1        .0    1185.1     334.4    339.60
      1.31      3.83      6.14       .00      .050      .080      .000      .000    303.30   4404.23
   .006016      546.      544.      566.         1         0         0       .00    565.03   5038.11


*SECNO 306.000
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44

   306.000     12.58    320.68       .00       .00    320.88       .20      2.17       .02    316.10
    8497.0    5962.1    2534.9        .0    1738.8     641.4        .0    1210.6     342.0    326.80
      1.35      3.43      3.95       .00      .050      .080      .000      .000    308.10   4402.04
   .002895      553.      517.      594.         3         0         0       .00    640.24   5042.28


*SECNO 308.000

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .51


3470 ENCROACHMENT STATIONS=     4510.0    5330.0  TYPE=      1  TARGET=      820.000
   308.000     11.28    323.18       .00       .00    323.95       .77      2.90       .17    317.40
    8497.0     876.4    7076.8     543.8     209.4     948.4     116.2    1235.2     349.1    319.50
      1.37      4.19      7.46      4.68      .050      .080      .050      .000    311.90   4510.00
   .011004      629.      538.      522.         0         0         0       .00    385.83   5120.57


1
   09AUG96      09:28:04                                                                                PAGE   36

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .300 CEHV=     .500
*SECNO 310.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.65


3470 ENCROACHMENT STATIONS=     4740.0    5260.0  TYPE=      1  TARGET=      520.000
   310.000     10.86    327.36       .00       .00    327.77       .40      3.70       .11    324.70
    8497.0    5532.4    2323.8     640.8    1000.5     509.9     255.0    1256.2     355.4    324.30
      1.40      5.53      4.56      2.51      .050      .080      .050      .000    316.50   4740.00
   .004050      643.      536.      740.         2         0         0       .00    459.62   5199.62


*SECNO 312.000
   312.000     13.32    330.32       .00       .00    330.64       .32      2.85       .03    325.40
    8497.0    2522.9    5314.8     659.3     620.9    1077.8     315.1    1286.0     365.5    329.20
      1.45      4.06      4.93      2.09      .050      .080      .050      .000    317.00   4677.37
   .004377      820.      502.      817.         3         0         0       .00    694.13   5371.49


*SECNO 314.000

3470 ENCROACHMENT STATIONS=     4400.0    5340.0  TYPE=      1  TARGET=      940.000
   314.000     14.27    332.87       .00       .00    333.12       .25      2.46       .02    332.10
    8497.0    2862.0    5261.6     373.4     908.3    1159.2     214.3    1315.4     377.6    330.80
      1.49      3.15      4.54      1.74      .050      .080      .050      .000    318.60   4410.43
   .004124      714.      505.      657.         2         0         0       .00    916.08   5326.51


*SECNO 316.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.43


3470 ENCROACHMENT STATIONS=     4510.0    5140.0  TYPE=      1  TARGET=      630.000
   316.000     11.37    334.37       .00       .00    334.86       .49      1.62       .12    331.50
    8497.0    1546.3    5713.1    1237.6     609.3     878.9     359.8    1342.7     387.1    328.60
      1.52      2.54      6.50      3.44      .050      .045      .050      .000    323.00   4510.00
   .002021      538.      591.      609.         3         0         0       .00    538.92   5140.00


1
   09AUG96      09:28:04                                                                                PAGE   37

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 318.000
BTCARD, BRIDGE STENCL=    4520.00   STENCR=    5140.00

3370 NORMAL BRIDGE, NRD=  24 MIN ELTRD=   330.40 MAX ELLC=   331.00
```

```
3470 ENCROACHMENT STATIONS=     4520.0    5140.0  TYPE=      1  TARGET=      620.000
        D/S FACE OLD CREEK ROAD BRIDGE
   318.000      9.81    334.51       .00       .00    334.97       .46       .10       .01    331.00
    8497.0    5934.6    1569.9     992.5    1041.7     328.8     202.0    1344.3     387.6    330.50
      1.52      5.70      4.78      4.91      .030      .030      .030      .000    324.70   4570.82
   .002986       46.       36.       44.        13         0         0   -122.30    548.91   5119.73


*SECNO 320.000
BTCARD, BRIDGE STENCL=    4548.60   STENCR=    5103.40

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .55


3370 NORMAL BRIDGE, NRD=  27 MIN ELTRD=   331.10 MAX ELLC=   331.00


3470 ENCROACHMENT STATIONS=     4548.6    5103.4  TYPE=      1  TARGET=      554.800
        U/S FACE OLD CREEK ROAD BRIDGE
   320.000      9.60    334.50       .00       .00    335.40       .90       .21       .22    331.00
    8497.0    4396.0    2555.5    1545.5     630.2     301.8     195.6    1345.6     388.2    330.50
      1.52      6.98      8.47      7.90      .030      .030      .030      .000    324.90   4548.60
   .009809       45.       44.       30.        13         0         0   -131.43    554.80   5103.40


*SECNO 322.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     4490.0    5100.0  TYPE=      1  TARGET=      610.000
   322.000     10.34    335.34       .00       .00    335.98       .64       .50       .08    332.30
    8497.0    2570.6    4368.1    1558.4     610.7     577.1     259.8    1347.1     388.8    330.50
      1.52      4.21      7.57      6.00      .060      .080      .060      .000    325.00   4506.50
   .011024       53.       60.       13.         4         0         0       .00    526.07   5100.00


1
   09AUG96      09:28:04                                                                                PAGE   38

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 324.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.82

   324.000      9.97    338.07       .00       .00    338.30       .23      2.19       .13    331.40
    8497.0    6058.5    1958.4     480.1    1567.9     491.7     217.7    1363.2     393.7    334.70
      1.55      3.86      3.98      2.20      .060      .080      .060      .000    328.10   4473.03
   .003339       292.      511.      465.         3         0         0       .00    711.70   5184.73


*SECNO 326.000
   326.000      8.52    339.02       .00       .00    339.38       .36      1.01       .07    334.20
    8497.0    2397.2    3843.4    2256.4     785.2     627.2     624.7    1376.8     398.5    333.20
      1.57      3.05      6.13      3.61      .060      .060      .060      .000    330.50   4514.68
   .004277       295.      217.      302.         3         0         0       .00    759.70   5274.37


*SECNO 328.000

3470 ENCROACHMENT STATIONS=     4753.6    5231.9  TYPE=      1  TARGET=      478.300
   328.000     10.94    341.64       .00       .00    342.40       .75      2.82       .20    338.80
    8497.0    1540.7    6683.5     272.8     376.1     881.1     120.8    1399.0     406.1    339.20
      1.59      4.10      7.59      2.26      .060      .060      .060      .000    330.70   4813.72
   .006365       669.      509.      515.         2         0         0       .00    350.61   5164.33


*SECNO 330.000

3470 ENCROACHMENT STATIONS=     4850.0    5135.5  TYPE=      1  TARGET=      285.500
   330.000     12.74    343.94       .00       .00    344.81       .87      2.35       .06    341.80
    8497.0     913.4    6779.6     804.0     263.4     825.4     232.2    1411.3     409.1    339.90
      1.61      3.47      8.21      3.46      .060      .060      .060      .000    331.20   4850.00
   .005642       415.      386.      433.         2         0         0       .00    285.50   5135.50


*SECNO 332.000
BTCARD, BRIDGE STENCL=    4861.40   STENCR=    5124.10

3301 HV CHANGED MORE THAN HVINS


3370 NORMAL BRIDGE, NRD=  30 MIN ELTRD=   341.40 MAX ELLC=   342.50

1
   09AUG96      09:28:04                                                                                PAGE   39

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
```

```
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     4861.4    5124.1  TYPE=      1  TARGET=      262.700
        D/S FACE HERITAGE WAY BRIDGE
   332.000     12.67    343.97    343.97       .00    345.77      1.80       .34       .46    341.10
    8497.0    2496.0    5719.0     282.1     254.6     503.2      58.1    1412.3     409.4    342.50
      1.61      9.80     11.36      4.86      .030      .030      .030      .000    331.30   4861.74
   .012916       15.       46.       71.        14        11         0   -188.37    256.57   5118.31


*SECNO 340.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.51


3370 NORMAL BRIDGE, NRD=  30 MIN ELTRD=   341.40 MAX ELLC=   342.50


3470 ENCROACHMENT STATIONS=     4881.4    5144.1  TYPE=      1  TARGET=      262.700
        U/S FACE HERITAGE WAY BRIDGE
   340.000     13.87    345.17       .00       .00    346.17      1.00       .16       .24    341.10
    8497.0    2768.9    4793.2     934.9     329.6     580.3     177.7    1412.8     409.5    342.50
      1.61      8.40      8.26      5.26      .030      .030      .030      .000    331.30   4881.40
   .005643       20.       20.       20.         6         0         0   -184.72    262.70   5144.10


*SECNO 342.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.61


3470 ENCROACHMENT STATIONS=     4836.2    5189.3  TYPE=      1  TARGET=      353.100
   342.000     14.97    346.27       .00       .00    346.54       .27       .15       .22    340.30
    8497.0    2487.1    3357.3    2652.6     586.2     762.7     704.9    1414.4     409.8    339.60
      1.61      4.24      4.40      3.76      .050      .080      .050      .000    331.30   4855.47
   .002179       45.       45.       44.         2         0         0       .00    333.83   5189.30


1
   09AUG96      09:28:04                                                                                                PAGE   40

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 344.000
   344.000     15.49    347.29       .00       .00    347.62       .33      1.05       .03    336.70
    8497.0    2533.5    4387.9    1575.6     472.3     953.4     496.6    1437.7     413.6    337.90
      1.64      5.36      4.60      3.17      .050      .080      .050      .000    331.80   4907.19
   .001954      519.      502.      517.         3         0         0       .00    321.45   5228.64


CCHV=     .100 CEHV=     .300
*SECNO 346.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .55

   346.000     13.70    348.50       .00       .00    349.37       .86      1.59       .16    341.20
    8497.0    4588.7    3621.4     286.9     560.5     538.5     157.3    1455.5     417.1    346.30
      1.66      8.19      6.72      1.82      .050      .080      .070      .000    334.80   4884.37
   .006484      475.      495.      497.         2         0         0       .00    286.93   5171.30


*SECNO 348.000
   348.000     14.26    350.56       .00       .00    351.26       .69      1.87       .02    344.90
    8497.0    2686.4    5785.8      24.9     379.4     892.8      30.5    1464.0     418.9    349.90
      1.67      7.08      6.48       .82      .050      .080      .070      .000    336.30   4870.34
   .006425      324.      263.      285.         2         0         0       .00    268.54   5138.88


*SECNO 350.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.49

   350.000     14.40    351.90       .00       .00    352.15       .25       .85       .04    354.10
    7800.0        .0    7788.2      11.8        .0    1951.7      33.0    1472.4     420.6    351.50
      1.69       .00      3.99       .36      .000      .080      .070      .000    337.50   4847.48
   .002436      205.      226.      220.         2         0         0       .00    376.99   5224.48


CCHV=     .300 CEHV=     .500
```

```
*SECNO 352.000

3265 DIVIDED FLOW

1
   09AUG96      09:28:04                                                                                                PAGE   41

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .44


3470 ENCROACHMENT STATIONS=     4780.0    5350.0  TYPE=      1  TARGET=      570.000
   352.000      9.68    353.68       .00       .00    354.42       .74      2.03       .25    356.80
    7800.0        .0    7393.1     406.9        .0    1046.7     142.3    1488.0     423.7    354.50
      1.71       .00      7.06      2.86      .000      .080      .080      .000    344.00   4881.26
   .012788      408.      430.      392.         2         0         0       .00    278.49   5278.70


*SECNO 354.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.48


3470 ENCROACHMENT STATIONS=     4840.0    5170.0  TYPE=      1  TARGET=      330.000
   354.000     12.56    357.56       .00       .00    358.11       .55      3.63       .06    354.60
    7800.0     231.4    7204.0     364.6      78.7    1173.6     179.1    1501.4     426.7    354.40
      1.73      2.94      6.14      2.04      .050      .080      .080      .000    345.00   4886.36
   .005817      445.      433.      529.         2         0         0       .00    283.64   5170.00


*SECNO 356.000

3470 ENCROACHMENT STATIONS=     4900.0    5100.0  TYPE=      1  TARGET=      200.000
   356.000     13.49    358.99       .00       .00    359.44       .46      1.31       .03    352.20
    7800.0    1471.5    5698.0     630.5     294.8     995.1     205.8    1510.8     428.4    354.00
      1.74      4.99      5.73      3.06      .050      .080      .080      .000    345.50   4900.00
   .003980      364.      259.      321.         2         0         0       .00    200.00   5100.00


*SECNO 358.000
BTCARD, BRIDGE STENCL=    4921.00   STENCR=    5112.00

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .37


3370 NORMAL BRIDGE, NRD=  27 MIN ELTRD=   353.40 MAX ELLC=   352.70

1
   09AUG96      09:28:04                                                                                                PAGE   42

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3470 ENCROACHMENT STATIONS=     4921.0    5112.0  TYPE=      1  TARGET=      191.000
        D/S FACE THOUSAND TRAILS RV PARK ENTRANCE BRIDGE
   358.000     12.23    359.03       .00       .00    360.18      1.15       .38       .35    352.50
    7800.0    2164.9    3903.7    1731.3     176.6     536.6     336.8    1512.1     428.6    349.40
      1.74     12.26      7.27      5.14      .050      .080      .080      .000    346.80   4921.00
   .029575       34.       49.       49.        12         0         0   -128.00    191.00   5112.00


*SECNO 360.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.74


3370 NORMAL BRIDGE, NRD=  27 MIN ELTRD=   353.40 MAX ELLC=   352.70


3470 ENCROACHMENT STATIONS=     4880.0    5150.0  TYPE=      1  TARGET=      270.000
        U/S FACE THOUSAND TRAILS RV PARK BRIDGE
   360.000     13.38    360.18       .00       .00    360.68       .50       .31       .19    352.50
    7800.0    2409.4    2655.4    2735.2     326.7     594.2     543.1    1512.7     428.7    349.40
      1.74      7.38      4.47      5.04      .050      .080      .080      .000    346.80   4880.00
   .009741       20.       20.       20.         3         0         0    -91.45    270.00   5150.00


*SECNO 362.000
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44


3470 ENCROACHMENT STATIONS=     4860.0    5150.0  TYPE=      1  TARGET=      290.000
   362.000     13.51    360.51       .00       .00    360.94       .44       .24       .02    351.90
    7800.0    1912.0    5022.5     865.5     489.2     833.8     294.0    1514.0     428.9    356.90
      1.75      3.91      6.02      2.94      .080      .080      .070      .000    347.00   4860.00
   .004715       31.       38.       41.         2         0         0       .00    290.00   5150.00


*SECNO 364.000

3470 ENCROACHMENT STATIONS=     4800.0    5150.0  TYPE=      1  TARGET=      350.000
1
   09AUG96      09:28:04                                                                                                PAGE   43


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   364.000     13.36    361.26       .00       .00    361.70       .44       .75       .00    359.20
    7800.0     100.4    7015.5     684.1      80.1    1260.4     273.5    1521.0     430.8    358.70
      1.75      1.25      5.57      2.50      .080      .080      .070      .000    347.90   4800.00
   .004586      246.      121.      376.         3         0         0       .00    350.00   5150.00


*SECNO 366.000

3470 ENCROACHMENT STATIONS=     4600.0    5180.0  TYPE=      1  TARGET=      580.000
   366.000     12.06    362.16       .00       .00    362.62       .47       .91       .01    355.70
    7800.0    1267.8    5734.0     798.2     495.5     925.2     315.5    1529.6     434.2    359.20
      1.76      2.56      6.20      2.53      .100      .080      .080      .000    350.10   4672.94
   .006373      475.      108.      410.         2         0         0       .00    507.06   5180.00


*SECNO 370.000
BTCARD, BRIDGE STENCL=    4400.00   STENCR=    5180.00

3370 NORMAL BRIDGE, NRD=  28 MIN ELTRD=   353.70 MAX ELLC=   353.90


3470 ENCROACHMENT STATIONS=     4400.0    5180.0  TYPE=      1  TARGET=      780.000
        SMALL CROSSING IN THOUSAND TRAILS RV PARK
   370.000     12.63    363.33       .00       .00    363.47       .14       .75       .10    353.90
    7800.0    3366.3     646.2    3787.5    1430.3     256.6    1059.9    1538.9     436.9    353.70
      1.78      2.35      2.52      3.57      .100      .080      .080      .000    350.70   4499.17
   .003274      207.      127.      189.        15         0         0    -78.44    680.83   5180.00


*SECNO 371.000

3370 NORMAL BRIDGE, NRD=  28 MIN ELTRD=   353.70 MAX ELLC=   353.90


3470 ENCROACHMENT STATIONS=     4400.0    5180.0  TYPE=      1  TARGET=      780.000
   371.000     12.68    363.38       .00       .00    363.52       .14       .05       .00    353.90
    7800.0    3383.7     639.5    3776.8    1460.0     257.9    1070.5    1539.8     437.1    353.70
      1.78      2.32      2.48      3.53      .100      .080      .080      .000    350.70   4493.91
   .003151       15.       15.       15.         1         0         0    -79.91    686.09   5180.00


*SECNO 372.000
1
   09AUG96      09:28:04                                                                                                PAGE   44


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3470 ENCROACHMENT STATIONS=     4625.0    5375.0  TYPE=      1  TARGET=      750.000
   372.000     11.32    364.32       .00       .00    364.57       .25       .99       .06    359.20
    7800.0    5531.2    2268.8        .0    1419.8     520.4        .0    1555.6     440.6    372.70
      1.80      3.90      4.36       .00      .060      .080      .000      .000    353.00   4625.00
   .003647      264.      398.      281.         2         0         0       .00    406.23   5031.23


*SECNO 374.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .46


3470 ENCROACHMENT STATIONS=     4730.0    5270.0  TYPE=      1  TARGET=      540.000
   374.000     10.96    366.96       .00       .00    367.46       .50      2.77       .12    364.80
    7800.0    2480.5    5251.2      68.3     490.7     876.8      40.0    1571.1     444.1    365.30
      1.82      5.06      5.99      1.71      .070      .120      .100      .000    356.00   4730.00
   .016951      397.      418.      377.         3         0         0       .00    364.60   5094.60


*SECNO 376.000
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.62


3470 ENCROACHMENT STATIONS=     4780.0    5220.0  TYPE=      1  TARGET=      440.000
   376.000     12.27    368.77       .00       .00    368.97       .21      1.42       .09    366.90
    7800.0    1053.9    5349.3    1396.8     332.3    1376.2     482.1    1576.8     445.1    368.30
      1.83      3.17      3.89      2.90      .070      .120      .100      .000    356.50   4780.00
   .006494       53.      184.       71.         2         0         0       .00    440.00   5220.00


*SECNO 378.000
BTCARD, BRIDGE STENCL=    4779.19   STENCR=    5186.58

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .40


3370 NORMAL BRIDGE, NRD=  32 MIN ELTRD=   360.70 MAX ELLC=   367.10


3470 ENCROACHMENT STATIONS=     4790.0    5210.0  TYPE=      1  TARGET=      420.000
        D/S FACE UVAS ROAD BRIDGE
1
   09AUG96      09:28:04                                                                                    PAGE   45

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   378.000     12.46    369.06       .00       .00    369.49       .44       .40       .12    367.60
    7800.0     302.6    6227.1    1270.3      99.0    1191.7     208.9    1578.1     445.4    367.10
      1.83      3.06      5.23      6.08      .070      .120      .100      .000    356.60   4790.00
   .040461       32.       35.       13.        11         0         0   -595.58    420.00   5210.00


*SECNO 380.000
BTCARD, BRIDGE STENCL=    4752.89   STENCR=    5208.79

3370 NORMAL BRIDGE, NRD=  40 MIN ELTRD=   361.60 MAX ELLC=   367.30


3470 ENCROACHMENT STATIONS=     4765.0    5235.0  TYPE=      1  TARGET=      470.000
        U/S FACE UVAS ROAD BRIDGE
   380.000     12.88    369.98       .00       .00    370.26       .28       .72       .05    367.60
    7800.0    1353.9    4505.7    1940.4     379.1    1109.0     389.9    1579.0     445.6    367.30
      1.83      3.57      4.06      4.98      .070      .120      .100      .000    357.10   4765.00
   .022108       25.       25.       25.        11         0         0   -982.85    470.00   5235.00


*SECNO 382.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.45

   382.000     13.33    370.43       .00       .00    370.51       .08       .19       .06    367.40
    7800.0    4186.6    2428.6    1184.8    1522.0    1365.5     799.2    1583.2     446.4    368.40
      1.84      2.75      1.78      1.48      .060      .120      .100      .000    357.10   4368.04
   .001115       33.       90.       66.         2         0         0       .00    573.81   4941.85


CCHV=     .100 CEHV=     .300
*SECNO 384.000
   384.000     13.04    371.34       .00       .00    371.47       .13       .95       .02    364.80
    7800.0    4350.9    3080.0     369.1    1295.7    1295.6     279.9    1630.5     455.3    369.70
      1.90      3.36      2.38      1.32      .060      .120      .100      .000    358.30   4530.68
   .002075      708.      519.      694.         3         0         0       .00    611.34   5142.02


*SECNO 386.000
   386.000     12.97    372.57       .00       .00    372.75       .18      1.26       .01    368.60
    7800.0    5517.3    2282.7        .0    1473.6     929.1        .0    1662.2     461.8    381.80
      1.95      3.74      2.46       .00      .060      .120      .000      .000    359.60   4552.70
   .002965      491.      547.      656.         2         0         0       .00    472.68   5025.38


1
   09AUG96      09:28:04                                                                                    PAGE   46

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 388.000
   388.000     11.52    374.02       .00       .00    374.17       .15      1.41       .00    367.70
    7800.0    2834.7    4965.3        .0     818.8    1711.1        .0    1688.1     466.7    384.00
      1.99      3.46      2.90       .00      .060      .120      .000      .000    362.50   4587.91
   .003224      453.      461.      354.         2         0         0       .00    459.55   5047.46


*SECNO 390.000

3265 DIVIDED FLOW
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .54

   390.000      6.97    376.57       .00       .00    377.01       .44      2.76       .09    374.30
    7800.0    1023.7    6720.4      55.9     256.5    1213.9      31.2    1711.7     472.3    376.20
      2.01      3.99      5.54      1.79      .060      .080      .050      .000    369.60   4492.23
   .010869      539.      501.      466.         3         0         0       .00    496.24   5129.03


*SECNO 392.000

3470 ENCROACHMENT STATIONS=     4428.6    5239.6  TYPE=      1  TARGET=      811.000
   392.000      7.92    381.52       .00       .00    381.93       .41      4.91       .00    379.20
    7800.0    1373.7    4960.1    1466.3     260.3     964.1     302.9    1730.8     477.6    377.50
      2.04      5.28      5.14      4.84      .060      .080      .050      .000    373.60   4818.09
   .007438      445.      576.      519.         4         0         0       .00    383.53   5201.62


*SECNO 394.000

3470 ENCROACHMENT STATIONS=     4862.1    5639.0  TYPE=      1  TARGET=      776.900
   394.000      9.09    385.59       .00       .00    386.18       .59      4.20       .05    383.10
    7800.0     191.8    7608.2        .0      51.3    1228.3        .0    1747.5     481.1    386.10
      2.07      3.74      6.19       .00      .050      .080      .000      .000    376.50   4862.10
   .008823      513.      527.      460.         2         0         0       .00    214.78   5076.88


*SECNO 396.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.46

1
   09AUG96      09:28:04                                                                                PAGE   47

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3470 ENCROACHMENT STATIONS=     4799.0    5529.7  TYPE=      1  TARGET=      730.700
   396.000      9.96    388.96       .00       .00    389.27       .31      3.07       .03    384.50
    7800.0     539.9    7260.1        .0     122.1    1621.6        .0    1765.7     484.0    392.10
      2.10      4.42      4.48       .00      .050      .080      .000      .000    379.00   4799.00
   .004151      494.      527.      498.         2         0         0       .00    260.75   5059.75


*SECNO 398.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .58

   398.000     11.40    391.90       .00       .00    392.87       .97      3.40       .20    391.70
    7800.0       6.1    7486.8     307.1       8.4     930.6      95.9    1782.1     487.1    388.70
      2.12       .72      8.05      3.20      .050      .080      .070      .000    380.50   4878.38
   .012161      526.      513.      561.         2         0         0       .00    258.75   5137.13


*SECNO 400.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.84

   400.000     14.19    395.39       .00       .00    395.75       .36      2.81       .06    394.10
    7800.0     160.8    7613.6      25.6      90.4    1573.2      24.5    1796.5     489.9    393.90
      2.15      1.78      4.84      1.05      .050      .080      .070      .000    381.20   4771.08
   .003604      395.      468.      400.         2         0         0       .00    303.49   5074.57


*SECNO 402.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .61

   402.000     10.36    398.06       .00       .00    398.85       .79      2.97       .13    409.00
    7800.0      53.1    7746.9        .0      17.8    1083.7        .0    1813.5     492.5    401.90
      2.17      2.99      7.15       .00      .050      .080      .000      .000    387.70   4707.48
   .009681      409.      536.      373.         2         0         0       .00    155.72   5059.01


1
   09AUG96      09:28:04                                                                                PAGE   48


T1      SANTA CLARA COUNTY FLOOD INSURANCE STUDY
T2      NOLTE and ASSOCIATES (djs)  April 1996
T3      UPPER UVAS CREEK - FW   FLOODWAY

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
```

```
      3.                                                                    242.31

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      2.           -1.

1
   09AUG96      09:28:04                                                                                                PAGE   49

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

 *PROF 2
0

 CCHV=     .300 CEHV=     .500
 *SECNO 200.000

 3470 ENCROACHMENT STATIONS=     4958.1    5100.0  TYPE=      1  TARGET=      141.930

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

         SANTA CLARA AREA LEVEE EVALUATION STUDY
         UPPER UVAS CREEK FLOODWAY
         FINAL FLOODWAY RUN; ADJUSTED TO SMOOTH FLOODWAY AND
         MINIMIZE HAZARDOUS VELOCITY INCREASES

         PREPARED SEPTEMBER 1991 BY
         NOLTE AND ASSOC.  (CDA/TRW)
         60 S. MARKET ST., SUITE 600
         SAN JOSE, CA 95113

         STARTING WSEL AND 100-YEAR FLOW WERE TAKEN FROM SCVWD LOMR
           PREPARED DECEMBER 1988 [STA 309+50]

         X-SECTIONS TAKEN LEFT TO RIGHT LOOKING D/S
   200.000     12.71    242.31       .00    241.31    243.57      1.26       .00       .00 100000.00
   13550.0       .0   13550.0        .0        .0    1503.2        .0        .0        .0 100000.00
       .00       .00      9.01       .00      .000      .040      .000      .000    229.60   4958.07
   .002725       0.        0.        0.         0         0         0       .00    141.93   5100.00

 *SECNO 202.000

 3470 ENCROACHMENT STATIONS=     4648.5    4780.0  TYPE=      1  TARGET=      131.540

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

   202.000     13.00    243.50       .00    242.94    244.90      1.40      1.26       .07 100000.00
   13550.0       .0   13550.0        .0        .0    1426.4        .0      14.5       1.4 100000.00
       .01       .00      9.50       .00      .000      .040      .000      .000    230.50   4648.46
   .003151      203.      430.      251.         2         0         0       .00    131.54   4780.00

1
   09AUG96      09:28:04                                                                                                PAGE   50

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

 *SECNO 204.000

 3470 ENCROACHMENT STATIONS=     4672.9    4800.0  TYPE=      1  TARGET=      127.060

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

         D/S FACE HECKER PASS ROAD (HIGHWAY 152)
   204.000     13.28    243.58       .00    243.00    245.08      1.51       .13       .05 100000.00
   13550.0       .0   13550.0        .0        .0    1376.3        .0      15.8       1.5 100000.00
       .01       .00      9.85       .00      .000      .040      .000      .000    230.30   4672.94
   .003205       67.       41.       60.         2         0         0       .00    127.06   4800.00

 SPECIAL BRIDGE

 5070, VARIABLE ELCHU OR ELCHD ON SB CARD NOT SPECIFIED
 SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      1.05      1.51      2.60       .00    118.00      2.10   2800.00      1.30    230.30     230.30

 *SECNO 210.000
 BTCARD, BRIDGE STENCL=    4508.44   STENCR=    4598.14
 CLASS A LOW FLOW

 3420 BRIDGE W.S.=     243.54 BRIDGE VELOCITY=       7.69     CALCULATED CHANNEL AREA=      1762.

  EGPRS     EGLWC     H3        QWEIR     QLOW      BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                              AREA
```

```
      .00    245.13       .08        0.    13550.     2800.     2688.      249.40    250.00        0.


 3470 ENCROACHMENT STATIONS=     4679.0    4809.0  TYPE=      1  TARGET=      130.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        U/S FACE HECKER PASS ROAD BRIDGE
   210.000     13.25    243.65       .00    243.10    245.13      1.48       .05       .00 100000.00
   13550.0        .0   13550.0        .0        .0    1387.9        .0      17.8       1.7 100000.00
       .02       .00      9.76       .00      .000      .040      .000      .000    230.40   4679.00
   .003170       76.       63.       47.         0         0         0       .00    130.00   4809.00


 *SECNO 212.000
1
   09AUG96      09:28:04                                                                                    PAGE   51

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .56


 3470 ENCROACHMENT STATIONS=     4717.0    4852.0  TYPE=      1  TARGET=      135.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

   212.000     13.22    244.02       .00    243.55    245.39      1.37       .22       .03 100000.00
   13550.0        .0   13550.0        .0        .0    1441.8        .0      19.1       1.8 100000.00
       .02       .00      9.40       .00      .000      .075      .000      .000    230.80   4717.00
   .010267       60.       42.       40.         2         0         0       .00    135.00   4852.00


 CCHV=     .100 CEHV=     .300
 *SECNO 214.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.81


 3470 ENCROACHMENT STATIONS=     4775.0    5191.1  TYPE=      1  TARGET=      416.080
   214.000     13.50    246.50       .00    245.91    246.70       .21      1.20       .12    238.40
   13550.0    6148.4    6759.8     641.8    1552.5    1983.1     246.7      45.8       4.7    241.80
       .05      3.96      3.41      2.60      .060      .075      .050      .000    233.00   4775.00
   .001298      593.      370.      558.         3         0         0       .00    416.08   5191.08


 *SECNO 216.000

 3470 ENCROACHMENT STATIONS=     4800.0    5175.0  TYPE=      1  TARGET=      375.000
   216.000     12.83    246.83       .00    246.13    247.05       .22       .34       .00    236.80
   13550.0    3648.4    9412.4     489.1     917.6    2534.8     203.6      67.5       7.0    243.30
       .07      3.98      3.71      2.40      .060      .075      .050      .000    234.00   4800.00
   .001380      252.      254.      268.         2         0         0       .00    375.00   5175.00


 *SECNO 218.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .54

1
   09AUG96      09:28:04                                                                                    PAGE   52

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 3470 ENCROACHMENT STATIONS=     4789.0    5103.3  TYPE=      1  TARGET=      314.310
   218.000     11.37    247.37       .00    246.33    247.82       .45       .71       .07 100000.00
   13550.0        .0   13550.0        .0        .0    2509.3        .0      88.9       9.4 100000.00
       .08       .00      5.40       .00      .000      .075      .000      .000    236.00   4789.00
   .004737      312.      303.      252.         2         0         0       .00    314.31   5103.31


 *SECNO 220.000

 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.96


 3470 ENCROACHMENT STATIONS=     4517.0    5278.3  TYPE=      1  TARGET=      761.290
   220.000     12.45    248.55       .00    247.78    248.71       .17       .86       .03    248.50
```

```
   13550.0    4572.7    8977.3        .0    1164.2    3105.6        .0     119.9      13.1 100000.00
       .12      3.93      2.89       .00      .060      .075      .000      .000    236.10   4517.00
   .001227      386.      401.      446.         2         0         0       .00    500.04   5278.29


 *SECNO 222.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .48


 3470 ENCROACHMENT STATIONS=     4820.0    5210.0  TYPE=      1  TARGET=      390.000
        BODFISH CREEK CONFLUENCE
   222.000      9.66    249.16       .00    248.36    249.44       .28       .69       .03    244.20
   10909.0    2319.2    8589.8        .0     535.5    2045.8        .0     150.2      17.0 100000.00
       .14      4.33      4.20       .00      .060      .075      .000      .000    239.50   4820.00
   .003384      339.      400.      415.         2         0         0       .00    390.00   5210.00


 *SECNO 224.000

 3470 ENCROACHMENT STATIONS=     4897.0    5307.0  TYPE=      1  TARGET=      410.000
   224.000     10.10    250.50       .00    249.75    250.75       .25      1.31       .00 100000.00
   10909.0        .0   10909.0        .0        .0    2730.6        .0     174.0      20.6 100000.00
       .17       .00      4.00       .00      .000      .075      .000      .000    240.40   4897.00
   .003291      406.      390.      307.         2         0         0       .00    410.00   5307.00


1
   09AUG96      09:28:04                                                                                PAGE   53

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 *SECNO 226.000

 3470 ENCROACHMENT STATIONS=     4815.0    5200.0  TYPE=      1  TARGET=      385.000
   226.000      9.64    252.24       .00    251.69    252.55       .31      1.78       .02    245.60
   10909.0    4373.7    2718.5    3816.8     974.6     585.5     886.6     207.0      25.7    246.80
       .20      4.49      4.64      4.31      .060      .075      .060      .000    242.60   4815.00
   .003113      596.      528.      612.         2         0         0       .00    385.00   5200.00


 *SECNO 228.000

 3470 ENCROACHMENT STATIONS=     4773.0    5245.0  TYPE=      1  TARGET=      472.000
   228.000      9.48    253.98       .00    253.13    254.37       .39      1.79       .02    252.00
   10909.0    1763.9    3543.3    5601.8     471.7     656.4    1102.5     231.2      30.2    249.00
       .23      3.74      5.40      5.08      .060      .075      .060      .000    244.50   4773.00
   .005289      464.      426.      457.         2         0         0       .00    472.00   5245.00


 *SECNO 230.000

 3470 ENCROACHMENT STATIONS=     4721.0    5184.0  TYPE=      1  TARGET=      463.000
   230.000      8.98    256.38       .00    255.40    256.87       .50      2.48       .03    255.10
   10909.0    3039.3    6565.9    1303.8     628.4    1078.9     246.6     249.1      34.2    254.00
       .25      4.84      6.09      5.29      .060      .075      .060      .000    247.40   4721.00
   .008557      354.      361.      405.         2         0         0       .00    463.00   5184.00


 *SECNO 232.000

 3470 ENCROACHMENT STATIONS=     4713.0    5244.0  TYPE=      1  TARGET=      531.000
   232.000     10.34    257.84       .00    256.81    258.21       .37      1.33       .01    254.20
   10909.0    3265.1    5224.3    2419.7     804.0     932.6     563.8     258.5      36.3    254.40
       .26      4.06      5.60      4.29      .060      .075      .060      .000    247.50   4713.00
   .005566      160.      210.      204.         2         0         0       .00    531.00   5244.00


 *SECNO 234.000

 3470 ENCROACHMENT STATIONS=     4975.0    5244.0  TYPE=      1  TARGET=      269.000
   234.000     11.73    259.33       .00    258.32    259.82       .48      1.57       .03 100000.00
   10909.0        .0    7139.8    3769.2        .0    1331.2     629.0     273.1      39.1    253.70
       .27       .00      5.36      5.99      .000      .075      .060      .000    247.60   4975.00
   .005148      414.      305.      208.         2         0         0       .00    269.00   5244.00


1
   09AUG96      09:28:04                                                                                PAGE   54

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 *SECNO 236.000

 3470 ENCROACHMENT STATIONS=     4825.0    5125.0  TYPE=      1  TARGET=      300.000
   236.000     12.79    261.29       .00    260.27    261.67       .37      1.84       .01    257.30
   10909.0    1093.4    9268.3     547.3     228.4    1871.4     125.0     288.8      41.3    257.50
```

```
      .29      4.79      4.95      4.38      .060      .100      .060      .000    248.50   4825.00
  .006082      310.      306.      423.         2         0         0       .00    300.00   5125.00


*SECNO 238.000

3470 ENCROACHMENT STATIONS=     4825.0    5060.0  TYPE=      1  TARGET=      235.000
   238.000     11.34    262.94       .00    262.11    263.47       .53      1.75       .05    261.80
   10909.0       4.5   10904.5        .0       2.3    1870.7        .0     299.7      42.7 100000.00
       .30      1.98      5.83       .00      .060      .100      .000      .000    251.60   4825.00
  .009801      238.      228.      286.         2         0         0       .00    235.00   5060.00


*SECNO 240.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.03


3470 ENCROACHMENT STATIONS=     4692.0    5268.0  TYPE=      1  TARGET=      576.000
   240.000     11.86    264.36       .00    263.40    264.50       .14      1.00       .04    263.50
   10909.0    9057.8    1851.2        .0    2796.4    1212.3        .0     327.4      46.5 100000.00
       .34      3.24      1.53       .00      .060      .100      .000      .000    252.50   4692.00
  .001069      398.      422.      548.         3         0         0       .00    576.00   5268.00


*SECNO 242.000

3470 ENCROACHMENT STATIONS=     4615.0    5204.0  TYPE=      1  TARGET=      589.000
   242.000     10.45    264.85       .00    263.88    264.96       .11       .46       .00    259.40
   10909.0    8814.9    1748.2     345.8    3011.3    1240.7     212.3     377.8      53.4    261.00
       .40      2.93      1.41      1.63      .060      .100      .060      .000    254.40   4615.00
  .000739      527.      510.      400.         3         0         0       .00    589.00   5204.00


*SECNO 244.000

3470 ENCROACHMENT STATIONS=     4590.0    5196.0  TYPE=      1  TARGET=      606.000
   244.000     10.29    265.19       .00    264.20    265.32       .13       .35       .01    263.60
   10909.0    8864.7    1184.3     860.0    2801.8     912.2     482.6     421.8      59.4    261.40
       .44      3.16      1.30      1.78      .060      .100      .060      .000    254.90   4590.00
  .000830      459.      435.      319.         2         0         0       .00    606.00   5196.00


1
   09AUG96      09:28:04                                                                          PAGE   55

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 246.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     4819.0    5219.3  TYPE=      1  TARGET=      400.250
   246.000      5.17    265.77    265.77    265.36    267.26      1.49      1.09       .41    265.10
   10909.0    5386.9    5522.1        .0     433.9     879.8        .0     450.6      65.0 100000.00
       .45     12.41      6.28       .00      .060      .100      .000      .000    260.60   4819.00
  .039781      376.      487.      873.        20         8         0       .00    400.25   5219.25


*SECNO 250.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.35


3470 ENCROACHMENT STATIONS=     4675.0    5325.0  TYPE=      1  TARGET=      650.000
   250.000      8.69    270.09       .00    269.18    270.25       .16      2.85       .13    268.90
   10909.0    4659.9    1788.2    4460.9    1354.2     703.3    1378.6     477.3      70.9    266.80
       .50      3.44      2.54      3.24      .060      .100      .060      .000    261.40   4675.00
  .002105      578.      546.      310.         6         0         0       .00    650.00   5325.00


*SECNO 252.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .52


3470 ENCROACHMENT STATIONS=     4942.0    5348.0  TYPE=      1  TARGET=      406.000
   252.000      9.84    271.84       .00    271.14    272.31       .47      1.97       .09    270.70
   10909.0        .0    3133.5    7775.5        .0     667.6    1345.5     511.0      77.5    267.30
       .53       .00      4.69      5.78      .000      .100      .060      .000    262.00   4942.00
  .007785      548.      511.      551.         4         0         0       .00    406.00   5348.00


1
   09AUG96      09:28:04                                                                          PAGE   56
```

```
    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 254.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.68

3470 ENCROACHMENT STATIONS=     4961.8    5529.0  TYPE=      1  TARGET=      567.210
   254.000      9.42    274.52       .00    273.52    274.73       .21      2.39       .03 100000.00
   10909.0        .0    2534.1    8374.9        .0     912.2    2159.3     542.9      83.6    269.50
       .57       .00      2.78      3.88      .000      .100      .060      .000    265.10   4961.79
   .002767      707.      498.      569.         2         0         0       .00    567.21   5529.00

*SECNO 256.000

3470 ENCROACHMENT STATIONS=     4916.0    5682.0  TYPE=      1  TARGET=      766.000
   256.000      8.71    275.81       .00    274.82    276.00       .19      1.27       .00    272.00
   10909.0        .8    3866.5    7041.7       1.1    1158.7    1971.2     570.5      89.3    271.60
       .60       .67      3.34      3.57      .060      .100      .060      .000    267.10   4916.00
   .004086      610.      497.      333.         3         0         0       .00    766.00   5682.00

*SECNO 258.000

3470 ENCROACHMENT STATIONS=     4700.0    5740.0  TYPE=      1  TARGET=     1040.000
   258.000      8.56    278.16       .00    277.16    278.28       .12      2.27       .01    275.20
   10909.0    1525.4    2531.4    6852.2     625.8    1113.6    2309.0     630.9     105.0    273.00
       .67      2.44      2.27      2.97      .060      .100      .060      .000    269.60   4700.00
   .002344      452.      531.      882.         2         0         0       .00   1040.00   5740.00

*SECNO 260.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=     4720.0    5736.0  TYPE=      1  TARGET=     1016.000
        SMALL RIVER CROSSING (NO BRIDGE)
   260.000      7.01    278.81       .00    277.86    278.97       .16       .68       .01    275.70
   10909.0    2123.7    4197.5    4587.8     589.9    1405.7    1462.2     649.8     110.2    279.70
       .69      3.60      2.99      3.14      .060      .100      .060      .000    271.80   4720.00
   .004283      233.      209.      223.         2         0         0       .00    978.33   5736.00

1
   09AUG96      09:28:04                                                                                    PAGE   57

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

FLOW DISTRIBUTION FOR SECNO=    260.00          CWSEL=    278.81

STA=    4720.    4856.    4895.    5163.    5208.    5515.    5736.
  PER Q=     15.4      4.1     38.5       .4     23.3     18.3
   AREA=    464.2    125.7   1405.7     21.4    816.8    624.0
    VEL=      3.6      3.5      3.0      2.0      3.1      3.2
  DEPTH=      3.4      3.2      5.4       .5      2.7      2.8

*SECNO 262.000

3470 ENCROACHMENT STATIONS=     4584.0    5579.0  TYPE=      1  TARGET=      995.000
   262.000      8.00    280.90       .00    279.89    281.06       .17      2.09       .00    278.30
   10909.0    2805.1    2188.2    5915.7     850.3     855.5    1701.8     689.9     121.6    279.60
       .74      3.30      2.56      3.48      .060      .100      .060      .000    272.90   4584.00
   .003961      503.      523.      499.         2         0         0       .00    995.00   5579.00

FLOW DISTRIBUTION FOR SECNO=    262.00          CWSEL=    280.90

STA=    4584.    4630.    4857.    5045.    5110.    5119.    5555.    5579.
  PER Q=      5.5     20.2     20.1      1.2       .6     50.1      2.3
   AREA=    169.1    681.2    855.5     77.1     23.3   1522.8     78.7
    VEL=      3.5      3.2      2.6      1.8      2.8      3.6      3.1
  DEPTH=      3.7      3.0      4.5      1.2      2.4      3.5      3.2

CCHV=     .300 CEHV=     .500
*SECNO 264.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=     4500.0    5215.0  TYPE=      1  TARGET=      715.000
   264.000      8.47    282.77       .00    281.93    283.07       .30      1.94       .07    280.90
   10909.0    4965.1    3664.9    2279.0    1136.9    1013.0     422.1     716.6     129.0    282.90
       .76      4.37      3.62      5.40      .060      .100      .060      .000    274.30   4500.00
   .006667      395.      483.      303.         2         0         0       .00    686.22   5215.00
```

```
FLOW DISTRIBUTION FOR SECNO=    264.00          CWSEL=    282.77

1
   09AUG96      09:28:04                                                                                                PAGE   58

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

STA=    4500.    4524.    4557.    4892.    5090.    5134.    5162.    5180.    5215.
  PER Q=     10.2      9.1     26.2     33.6      1.2      7.5      5.3      6.8
   AREA=    175.5    167.8    793.6   1013.0     38.7    139.7     94.3    149.4
    VEL=      6.4      5.9      3.6      3.6      3.4      5.9      6.1      5.0
  DEPTH=      7.2      5.1      2.4      5.2       .9      5.0      5.3      4.3

*SECNO 266.000

3470 ENCROACHMENT STATIONS=     4620.0    5118.0  TYPE=      1  TARGET=      498.000
   266.000     10.23    285.53       .00    284.99    285.87       .35      2.78       .02    281.70
   10909.0    6519.3    3983.9     405.8    1268.2     957.9     152.7     743.3     135.3    282.30
       .79      5.14      4.16      2.66      .060      .100      .060      .000    275.30   4620.00
   .005357      429.      505.      518.         2         0         0       .00    498.00   5118.00

FLOW DISTRIBUTION FOR SECNO=    266.00          CWSEL=    285.53

STA=    4620.    4676.    4791.    4819.    4832.    4870.    4908.    5035.    5106.    5117.    5118.
  PER Q=      5.8     16.3     10.4      7.6     13.4      6.3     36.5      3.1       .6       .1
   AREA=    170.9    415.5    183.0    110.0    237.2    151.5    957.9    125.9     22.2      4.6
    VEL=      3.7      4.3      6.2      7.6      6.2      4.5      4.2      2.7      2.9      1.7
  DEPTH=      3.1      3.6      6.4      8.5      6.3      3.9      7.5      1.8      2.1      3.8

*SECNO 268.000

3470 ENCROACHMENT STATIONS=     4822.0    5130.0  TYPE=      1  TARGET=      308.000
   268.000     12.57    288.17       .00    287.70    288.52       .35      2.64       .00    279.40
   10909.0    5256.0    4317.9    1335.1     966.6    1085.6     354.6     779.7     142.4    283.50
       .83      5.44      3.98      3.77      .060      .100      .060      .000    275.60   4822.00
   .003308      575.      517.     1632.         3         0         0       .00    308.00   5130.00

*SECNO 270.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .64

3470 ENCROACHMENT STATIONS=     4803.0    4947.6  TYPE=      1  TARGET=      144.600
   270.000     13.80    289.70       .00    289.05    290.32       .62      1.67       .14 100000.00
   10909.0        .0   10909.0        .0        .0    1723.8        .0     797.3     144.9 100000.00
       .84       .00      6.33       .00      .000      .100      .000      .000    275.90   4803.00
   .008107      396.      209.     1579.         2         0         0       .00    144.60   4947.60

1
   09AUG96      09:28:04                                                                                                PAGE   59

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 272.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.22

3470 ENCROACHMENT STATIONS=     4775.0    4991.0  TYPE=      1  TARGET=      216.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        D/S FACE WATSONVILLE ROAD BRIDGE
   272.000     14.22    290.22       .00    289.53    290.54       .32       .13       .09 100000.00
   10362.0        .0   10362.0        .0        .0    2291.2        .0     799.2     145.1 100000.00
       .84       .00      4.52       .00      .000      .060      .000      .000    276.00   4775.00
   .001486       49.       43.       59.         2         0         0       .00    216.00   4991.00


SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON SB CARD NOT SPECIFIED
SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.25       1.61       2.60        .00    166.20       4.40    2454.00       1.70    276.00     276.00

*SECNO 280.000
BTCARD, BRIDGE STENCL=    4722.17   STENCR=    4906.26
PRESSURE FLOW


 EGPRS      EGLWC      H3         QWEIR      QPR        BAREA    TRAPEZOID      ELLC       ELTRD      WEIRLN
```

```
                                                        AREA
    290.67    290.54       .02        0.    10362.     2454.     2391.      289.00    292.10        0.


3470 ENCROACHMENT STATIONS=     4765.0    4976.6  TYPE=      1  TARGET=      211.600

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        U/S FACE WATSONVILLE ROAD BRIDGE
   280.000     14.39    290.39       .00    289.65    290.67       .28       .13       .00 100000.00
   10362.0        .0   10362.0        .0        .0    2430.3        .0     802.4     145.4 100000.00
       .85       .00      4.26       .00      .000      .060      .000      .000    276.00   4765.00
   .001205       77.       58.      107.         2         0         0       .00    211.60   4976.60


1
   09AUG96      09:28:04                                                                                PAGE   60

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 282.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .62


3470 ENCROACHMENT STATIONS=     4825.0    5025.0  TYPE=      1  TARGET=      200.000
   282.000     14.40    290.50       .00    289.84    290.78       .28       .11       .00 100000.00
   10362.0        .0   10355.7       6.3        .0    2418.9       3.8     805.7     145.7    288.60
       .85       .00      4.28      1.64      .000      .100      .050      .000    276.10   4825.00
   .003136       43.       60.       44.         2         0         0       .00    200.00   5025.00


CCHV=     .100 CEHV=     .300
*SECNO 284.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .54


3470 ENCROACHMENT STATIONS=     4930.0    5040.0  TYPE=      1  TARGET=      110.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

   284.000     15.64    292.64       .00    292.32    293.55       .91      2.58       .19 100000.00
   10362.0        .0   10362.0        .0        .0    1357.0        .0     826.8     147.4 100000.00
       .87       .00      7.64       .00      .000      .100      .000      .000    277.00   4930.00
   .010954      266.      485.      214.         2         0         0       .00    110.00   5040.00


*SECNO 286.000

3470 ENCROACHMENT STATIONS=     4965.0    5040.0  TYPE=      1  TARGET=       75.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        LITTLE ARTHUR CREEK CONFLUENCE
   286.000     19.08    298.48       .00    298.32    299.57      1.09      5.96       .05 100000.00
    8497.0        .0    8497.0        .0        .0    1015.7        .0     840.6     148.5 100000.00
       .89       .00      8.37       .00      .000      .100      .000      .000    279.40   4965.00
   .012809      410.      508.      518.         3         0         0       .00     75.00   5040.00


1
   09AUG96      09:28:04                                                                                PAGE   61

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 288.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.63


3470 ENCROACHMENT STATIONS=     4915.0    5085.0  TYPE=      1  TARGET=      170.000
   288.000     18.10    300.90       .00    300.34    301.20       .30      1.55       .08    291.80
    8497.0    1351.4   6999.4     146.2     296.2    1591.4      52.5     854.2     149.6    296.50
       .91      4.56      4.40      2.79      .050      .080      .050      .000    282.80   4915.00
   .001855      381.      400.      411.         3         0         0       .00    170.00   5085.00


*SECNO 290.000
```

```
3470 ENCROACHMENT STATIONS=     4850.0    5150.0  TYPE=      1  TARGET=      300.000
   290.000     18.71    301.71       .00    300.79    301.90       .19       .69       .01    296.40
    8497.0    1019.5    6813.8     663.7     376.9    1879.6     230.2     876.3     151.9    296.80
       .95      2.71      3.63      2.88      .050      .080      .050      .000    283.00   4850.00
   .001374      425.      442.      375.         3         0         0       .00    300.00   5150.00


*SECNO 292.000

3470 ENCROACHMENT STATIONS=     4750.0    5116.8  TYPE=      1  TARGET=      366.800
   292.000     16.78    302.38       .00    301.43    302.56       .18       .65       .00    300.50
    8497.0     569.5    7927.5        .0     285.3    2283.7        .0     900.8     154.9 100000.00
       .98      2.00      3.47       .00      .050      .080      .000      .000    285.60   4750.00
   .001707      317.      444.      354.         2         0         0       .00    366.80   5116.80


*SECNO 294.000

3470 ENCROACHMENT STATIONS=     4700.0    5083.9  TYPE=      1  TARGET=      383.890
   294.000     16.90    303.30       .00    302.27    303.55       .25       .97       .02    296.60
    8497.0    1832.2    6649.6      15.2     636.7    1551.9       8.9     929.0     159.0    300.70
      1.02      2.88      4.28      1.71      .050      .080      .050      .000    286.40   4700.00
   .002041      417.      539.      401.         2         0         0       .00    383.89   5083.89


1
   09AUG96      09:28:04                                                                                                PAGE   62

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 296.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .44


3470 ENCROACHMENT STATIONS=     4800.0    5050.0  TYPE=      1  TARGET=      249.960
   296.000     15.69    304.69       .00    304.10    305.71      1.02      1.93       .23    301.90
    8497.0     986.3    7510.7        .0     234.6     884.0        .0     947.2     162.2 100000.00
      1.04      4.20      8.50       .00      .050      .080      .000      .000    289.00   4800.00
   .010604      402.      506.      468.         3         0         0       .00    249.96   5049.96


*SECNO 298.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.41


3470 ENCROACHMENT STATIONS=     4850.0    5067.4  TYPE=      1  TARGET=      217.440
   298.000     14.87    308.87       .00    308.00    309.40       .52      3.64       .05    306.30
    8497.0     781.6    7715.4        .0     200.5    1293.2        .0     961.9     164.6 100000.00
      1.06      3.90      5.97       .00      .050      .080      .000      .000    294.00   4850.00
   .005340      401.      509.      309.         2         0         0       .00    217.44   5067.44


*SECNO 300.000

3470 ENCROACHMENT STATIONS=     4880.0    5054.5  TYPE=      1  TARGET=      174.530
   300.000     16.36    311.66       .00    310.89    312.44       .78      2.97       .08    310.20
    8497.0     401.1    8095.9        .0     120.7    1121.5        .0     977.6     166.9 100000.00
      1.08      3.32      7.22       .00      .050      .080      .000      .000    295.30   4880.00
   .006683      491.      499.      417.         2         0         0       .00    174.53   5054.53


*SECNO 302.000

3470 ENCROACHMENT STATIONS=     4750.0    5059.5  TYPE=      1  TARGET=      309.520
   302.000     17.13    315.43       .00    314.46    316.19       .76      3.75       .00    311.00
    8497.0    1229.6    7267.4        .0     324.4     979.9        .0     993.1     169.9 100000.00
      1.10      3.79      7.42       .00      .050      .080      .000      .000    298.30   4750.00
   .007500      549.      528.      617.         2         0         0       .00    309.52   5059.52


1
   09AUG96      09:28:04                                                                                                PAGE   63

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 304.000

3470 ENCROACHMENT STATIONS=     4550.0    5038.1  TYPE=      1  TARGET=      488.110
   304.000     15.94    319.24       .00    318.25    319.70       .46      3.48       .03    316.10
    8497.0    2928.2    5568.8        .0     824.4     892.5        .0    1012.0     174.9 100000.00
      1.13      3.55      6.24       .00      .050      .080      .000      .000    303.30   4550.00
   .005511      546.      544.      566.         1         0         0       .00    488.11   5038.11
```

```
*SECNO 306.000

3470 ENCROACHMENT STATIONS=     4650.0    5042.3  TYPE=      1  TARGET=      392.280
   306.000     13.51    321.61       .00    320.68    321.89       .28      2.17       .02    316.10
    8497.0    5375.4    3121.6        .0    1280.0     714.3        .0    1034.9     180.4 100000.00
      1.16      4.20      4.37       .00      .050      .080      .000      .000    308.10   4650.00
   .003113      553.      517.      594.         3         0         0       .00    392.28   5042.28


*SECNO 308.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .70


3470 ENCROACHMENT STATIONS=     4510.0    5100.0  TYPE=      1  TARGET=      590.000
   308.000     12.05    323.95       .00    323.18    324.43       .49      2.48       .06    317.40
    8497.0    1472.9    6340.6     683.6     453.5    1043.9     136.3    1059.1     187.2    319.50
      1.19      3.25      6.07      5.02      .050      .080      .050      .000    311.90   4510.00
   .006415      629.      538.      522.         2         0         0       .00    590.00   5100.00


CCHV=     .300 CEHV=     .500
*SECNO 310.000

3470 ENCROACHMENT STATIONS=     4775.0    5150.0  TYPE=      1  TARGET=      375.000
   310.000     10.76    327.26       .00    327.36    327.75       .50      3.32       .00    324.70
    8497.0    5304.2    2497.6     695.2     858.1     503.2     220.3    1081.3     194.3    324.30
      1.22      6.18      4.96      3.16      .050      .080      .050      .000    316.50   4775.00
   .004889      643.      536.      740.         2         0         0       .00    375.00   5150.00


*SECNO 312.000

3470 ENCROACHMENT STATIONS=     4825.0    5075.0  TYPE=      1  TARGET=      250.000
1
   09AUG96      09:28:04                                                                          PAGE   64


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   312.000     13.58    330.58       .00    330.32    331.03       .44      3.26       .02    325.40
    8497.0    2546.3    5950.7        .0     489.3    1103.3        .0    1105.3     199.5 100000.00
      1.26      5.20      5.39       .00      .050      .080      .000      .000    317.00   4825.00
   .004951      820.      502.      817.         2         0         0       .00    250.00   5075.00


*SECNO 314.000

3470 ENCROACHMENT STATIONS=     4845.0    5150.0  TYPE=      1  TARGET=      305.000
   314.000     14.99    333.59       .00    332.87    334.10       .51      3.04       .04    332.10
    8497.0     268.6    7581.0     647.4      85.6    1268.9     180.4    1125.1     203.3    330.80
      1.28      3.14      5.97      3.59      .050      .080      .050      .000    318.60   4845.00
   .006334      714.      505.      657.         2         0         0       .00    305.00   5150.00


*SECNO 316.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.85


3470 ENCROACHMENT STATIONS=     4895.0    5100.0  TYPE=      1  TARGET=      205.000
   316.000     12.40    335.40       .00    334.37    335.98       .58      1.85       .03    331.50
    8497.0     704.9    6522.4    1269.7     226.3     975.8     323.4    1145.8     206.7    328.60
      1.31      3.11      6.68      3.93      .050      .045      .050      .000    323.00   4895.00
   .001860      538.      591.      609.         3         0         0       .00    205.00   5100.00


*SECNO 318.000
BTCARD, BRIDGE STENCL=    4845.00   STENCR=    5119.73

3370 NORMAL BRIDGE, NRD=  24 MIN ELTRD=   330.40 MAX ELLC=   331.00


3470 ENCROACHMENT STATIONS=     4845.0    5119.7  TYPE=      1  TARGET=      274.730
        D/S FACE OLD CREEK ROAD BRIDGE
   318.000     10.69    335.39       .00    334.51    336.20       .81       .10       .11    331.00
    8497.0    4854.5    2076.4    1566.1     586.9     367.5     298.6    1147.1     206.9    330.50
      1.31      8.27      5.65      5.24      .030      .030      .030      .000    324.70   4845.00
   .003603       46.       36.       44.        12         0         0   -116.01    274.73   5119.73


*SECNO 320.000
1
   09AUG96      09:28:04                                                                          PAGE   65


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST
```

```
BTCARD, BRIDGE STENCL=    4843.60   STENCR=    5103.40

3370 NORMAL BRIDGE, NRD=  27 MIN ELTRD=   331.10 MAX ELLC=   331.00


3470 ENCROACHMENT STATIONS=     4843.6    5103.4  TYPE=      1  TARGET=      259.800
        U/S FACE OLD CREEK ROAD BRIDGE
   320.000     10.58    335.48       .00    334.50    336.49      1.01       .19       .10    331.00
    8497.0    3936.4    2473.0    2087.6     448.1     339.5     281.1    1148.2     207.2    330.50
      1.31      8.78      7.28      7.43      .030      .030      .030      .000    324.90   4843.60
   .006207       45.       44.       30.        13         0         0    -54.15    259.80   5103.40


*SECNO 322.000

3470 ENCROACHMENT STATIONS=     4830.0    5100.0  TYPE=      1  TARGET=      270.000
   322.000     11.35    336.35       .00    335.34    336.93       .58       .31       .13    332.30
    8497.0    2250.5    4352.8    1893.8     432.8     652.1     332.5    1149.5     207.4    330.50
      1.32      5.20      6.67      5.70      .060      .080      .060      .000    325.00   4837.74
   .007283       53.       60.       13.         3         0         0       .00    262.25   5100.00


*SECNO 324.000

3470 ENCROACHMENT STATIONS=     4850.0    5150.0  TYPE=      1  TARGET=      300.000
   324.000     10.75    338.85       .00    338.07    339.26       .41      2.28       .05    331.40
    8497.0    4929.4    2657.4     910.2     895.4     544.4     274.7    1164.2     210.0    334.70
      1.34      5.51      4.88      3.31      .060      .080      .060      .000    328.10   4850.00
   .004378      292.      511.      465.         2         0         0       .00    300.00   5150.00


*SECNO 326.000

3470 ENCROACHMENT STATIONS=     4854.0    5085.0  TYPE=      1  TARGET=      231.000
   326.000      9.44    339.94       .00    339.02    340.50       .56      1.16       .08    334.20
    8497.0    2287.4    4795.5    1414.0     491.0     705.2     275.8    1173.9     211.7    333.20
      1.35      4.66      6.80      5.13      .060      .060      .060      .000    330.50   4854.00
   .004505      295.      217.      302.         2         0         0       .00    231.00   5085.00


*SECNO 328.000

3470 ENCROACHMENT STATIONS=     4930.0    5065.0  TYPE=      1  TARGET=      135.000
1
   09AUG96      09:28:04                                                                                    PAGE   66

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   328.000     11.91    342.61       .00    341.64    343.64      1.04      2.90       .24    338.80
    8497.0     300.2    8196.8        .0      70.6     990.4        .0    1189.7     214.0 100000.00
      1.37      4.25      8.28       ,00      .060      .060      .000      .000    330.70   4930.00
   .006706      669.      509.      515.         2         0         0       .00    135.00   5065.00


*SECNO 330.000

3470 ENCROACHMENT STATIONS=     4927.0    5046.0  TYPE=      1  TARGET=      119.000
   330.000     13.74    344.94       .00    343.94    346.08      1.15      2.39       .06    341.80
    8497.0     324.4    8015.6     157.0      85.5     910.2      39.7    1199.1     215.2    339.90
      1.38      3.80      8.81      3.96      .060      .060      .060      .000    331.20   4927.00
   .005692      415.      386.      433.         2         0         0       .00    119.00   5046.00


*SECNO 332.000
BTCARD, BRIDGE STENCL=    4930.00   STENCR=    5095.00

3301 HV CHANGED MORE THAN HVINS


3370 NORMAL BRIDGE, NRD=  30 MIN ELTRD=   341.40 MAX ELLC=   342.50


3470 ENCROACHMENT STATIONS=     4930.0    5095.0  TYPE=      1  TARGET=      165.000
        D/S FACE HERITAGE WAY BRIDGE
   332.000     13.62    344.92       .00    343.97    346.70      1.78       .30       .32    341.10
    8497.0    2197.4    5921.7     377.8     182.1     565.1     106.8    1200.0     215.3    342.50
      1.38     12.06     10.48      3.54      .030      .030      .030      .000    331.30   4930.00
   .009409       15.       46.       71.        12         0         0   -105.93    165.00   5095.00


*SECNO 340.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50


3370 NORMAL BRIDGE, NRD=  30 MIN ELTRD=   341.40 MAX ELLC=   342.50
```

```
     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3470 ENCROACHMENT STATIONS=     4910.0    5090.0  TYPE=      1  TARGET=      180.000
        U/S FACE HERITAGE WAY BRIDGE
   340.000     14.73    346.03       .00    345.17    347.05      1.02       .12       .23    341.10
    8497.0    3180.9    4815.6     500.5     340.9     636.0     155.7    1200.5     215.4    342.50
      1.38      9.33      7.57      3.21      .030      .030      .030      .000    331.30   4910.00
   .004197       20.       20.       20.         4         0         0   -105.93    180.00   5090.00


*SECNO 342.000

3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     4900.0    5100.0  TYPE=      1  TARGET=      200.000
   342.000     15.70    347.00       .00    346.27    347.39       .39       .15       .19    340.30
    8497.0    2317.7    4037.7    2141.6     464.7     808.2     428.8    1201.9     215.6    339.60
      1.39      4.99      5.00      4.99      .050      .080      .050      .000    331.30   4900.00
   .002598       45.       45.       44.         2         0         0       .00    200.00   5100.00


*SECNO 344.000

3470 ENCROACHMENT STATIONS=     4907.2    5100.0  TYPE=      1  TARGET=      192.810
   344.000     16.32    348.12       .00    347.29    348.44       .33      1.04       .02    336.70
    8497.0    2717.9    4428.0    1351.1     524.4    1011.6     347.8    1222.9     217.9    337.90
      1.42      5.18      4.38      3.88      .050      .080      .050      .000    331.80   4907.19
   .001633      519.      502.      517.         2         0         0       .00    192.81   5100.00


CCHV=     .100 CEHV=     .300
*SECNO 346.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .46


3470 ENCROACHMENT STATIONS=     4914.0    5028.0  TYPE=      1  TARGET=      114.000
   346.000     14.26    349.06       .00    348.50    350.18      1.11      1.50       .24    341.20
    8497.0    4293.1    4203.9        .0     457.9     565.7        .0    1239.2     219.6 100000.00
      1.43      9.38      7.43       .00      .050      .080      .000      .000    334.80   4914.00
   .007824      475.      495.      497.         2         0         0       .00    114.00   5028.00
```

1


```
     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 348.000

3470 ENCROACHMENT STATIONS=     4918.0    5045.0  TYPE=      1  TARGET=      127.000
   348.000     15.18    351.48       .00    350.56    352.26       .79      2.05       .03    344.90
    8497.0    1665.5    6831.5        .0     220.9     975.3        .0    1246.4     220.4 100000.00
      1.44      7.54      7.00       .00      .050      .080      .000      .000    336.30   4918.00
   .006667      324.      263.      285.         2         0         0       .00    127.00   5045.00


*SECNO 350.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77


3470 ENCROACHMENT STATIONS=     4847.5    5059.0  TYPE=      1  TARGET=      211.520
   350.000     15.33    352.83       .00    351.90    353.03       .20       .71       .06 100000.00
    7800.0        .0    7800.0        .0        .0    2148.0        .1    1255.0     221.3    351.50
      1.46       .00      3.63       .18      .000      .080      .070      .000    337.50   4847.48
   .001785      205.      226.      220.         2         0         0       .00    211.52   5059.00


CCHV=     .300 CEHV=     .500
*SECNO 352.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .39
```

```
3470 ENCROACHMENT STATIONS=     4881.3    5052.0  TYPE=      1  TARGET=      170.740
   352.000     10.14    354.14       .00    353.68    354.88       .75      1.58       .27 100000.00
    7800.0        .0    7800.0        .0        .0    1124.3        .0    1271.2     223.2 100000.00
      1.48       .00      6.94       .00      .000      .080      .000      .000    344.00   4881.26
   .011449      408.      430.      392.         2         0         0       .00    170.14   5051.40


*SECNO 354.000

3470 ENCROACHMENT STATIONS=     4939.0    5070.0  TYPE=      1  TARGET=      131.000
1
   09AUG96      09:28:04                                                                                    PAGE   69


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   354.000     12.83    357.83       .00    357.56    358.47       .64      3.56       .03    354.60
    7800.0       2.1    7783.9      14.0       1.6    1207.0       7.7    1282.8     224.7    354.40
      1.50      1.34      6.45      1.81      .050      .080      .080      .000    345.00   4939.00
   .006185      445.      433.      529.         2         0         0       .00    131.00   5070.00


*SECNO 356.000

3470 ENCROACHMENT STATIONS=     4900.0    5100.0  TYPE=      1  TARGET=      200.000
   356.000     13.85    359.35       .00    358.99    359.77       .41      1.23       .07    352.20
    7800.0    1551.0    5587.8     661.2     318.7    1028.0     222.0    1291.6     225.8    354.00
      1.51      4.87      5.44      2.98      .050      .080      .080      .000    345.50   4900.00
   .003435      364.      259.      321.         2         0         0       .00    200.00   5100.00


*SECNO 358.000
BTCARD, BRIDGE STENCL=    4921.00   STENCR=    5112.00

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .38


3370 NORMAL BRIDGE, NRD=  27 MIN ELTRD=   353.40 MAX ELLC=   352.70


3470 ENCROACHMENT STATIONS=     4921.0    5112.0  TYPE=      1  TARGET=      191.000
        D/S FACE THOUSAND TRAILS RV PARK ENTRANCE BRIDGE
   358.000     12.56    359.36       .00    359.03    360.41      1.05       .33       .32    352.50
    7800.0    2273.8    3733.7    1792.5     193.2     553.4     367.4    1293.1     226.0    349.40
      1.51     11.77      6.75      4.88      .050      .080      .080      .000    346.80   4921.00
   .024417       34.       49.       49.        12         0         0   -128.00    191.00   5112.00


*SECNO 360.000

3370 NORMAL BRIDGE, NRD=  27 MIN ELTRD=   353.40 MAX ELLC=   352.70


3470 ENCROACHMENT STATIONS=     4900.0    5100.0  TYPE=      1  TARGET=      200.000
        U/S FACE THOUSAND TRAILS RV PARK BRIDGE
   360.000     13.29    360.09       .00    360.18    360.88       .78       .39       .08    352.50
    7800.0    2694.3    3321.6    1784.0     277.9     590.2     400.5    1293.6     226.0    349.40
      1.51      9.69      5.63      4.45      .050      .080      .080      .000    346.80   4900.00
   .015593       20.       20.       20.         2         0         0   -127.02    200.00   5100.00


1
   09AUG96      09:28:04                                                                                    PAGE   70


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 362.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.63


3470 ENCROACHMENT STATIONS=     4945.0    5150.0  TYPE=      1  TARGET=      205.000
   362.000     13.66    360.66       .00    360.51    361.26       .60       .33       .06    351.90
    7800.0    1001.4    5747.3    1051.3     206.6     846.0     309.4    1294.7     226.2    356.90
      1.52      4.85      6.79      3.40      .080      .080      .070      .000    347.00   4945.00
   .005883       31.       38.       41.         2         0         0       .00    205.00   5150.00


*SECNO 364.000

3470 ENCROACHMENT STATIONS=     4850.0    5150.0  TYPE=      1  TARGET=      300.000
   364.000     13.80    361.70       .00    361.26    362.08       .38       .74       .07    359.20
    7800.0     144.3    6833.7     822.0      88.5    1318.7     325.1    1301.3     227.7    358.70
      1.53      1.63      5.18      2.53      .080      .080      .070      .000    347.90   4850.00
```

```
   .003743      246.      121.      376.         3         0         0       .00    300.00   5150.00


 *SECNO 366.000

 3470 ENCROACHMENT STATIONS =     4840.0    5180.0  TYPE=      1  TARGET=      340.000
    366.000     12.36    362.46       .00    362.16    362.88       .42       .78       .02    355.70
     7800.0    1280.8    5609.4     909.8     431.8     958.3     358.5    1310.2     230.0    359.20
       1.54      2.97      5.85      2.54      .100      .080      .080      .000    350.10   4840.00
   .005426      475.      108.      410.         3         0         0       .00    340.00   5180.00


 *SECNO 370.000
 BTCARD, BRIDGE STENCL=    4828.00   STENCR=    5180.00

 3370 NORMAL BRIDGE, NRD=  28 MIN ELTRD=   353.70 MAX ELLC=   353.90


 3470 ENCROACHMENT STATIONS=     4828.0    5180.0  TYPE=      1  TARGET=      352.000
        SMALL CROSSING IN THOUSAND TRAILS RV PARK
    370.000     12.79    363.49       .00    363.33    363.67       .18       .72       .07    353.90
     7800.0    3052.8     679.8    4067.4    1008.5     260.3    1089.0    1318.5     231.4    353.70
       1.55      3.03      2.61      3.74      .100      .080      .080      .000    350.70   4828.00
   .003457      207.      127.      189.        14         0         0    -10.50    352.00   5180.00


1
   09AUG96      09:28:04                                                                                    PAGE   71

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 *SECNO 371.000

 3370 NORMAL BRIDGE, NRD=  28 MIN ELTRD=   353.70 MAX ELLC=   353.90


 3470 ENCROACHMENT STATIONS=     4828.0    5180.0  TYPE=      1  TARGET=      352.000
    371.000     12.85    363.55       .00    363.38    363.72       .18       .05       .00    353.90
     7800.0    3055.3     675.8    4069.0    1017.5     261.4    1098.3    1319.3     231.5    353.70
       1.55      3.00      2.58      3.70      .100      .080      .080      .000    350.70   4828.00
   .003365       15.       15.       15.         1         0         0    -10.50    352.00   5180.00


 *SECNO 372.000

 3470 ENCROACHMENT STATIONS=     4796.0    5031.0  TYPE=      1  TARGET=      235.000
    372.000     11.69    364.69       .00    364.32    365.15       .47      1.28       .15    359.20
     7800.0    4776.6    3023.4        .0     877.5     544.1        .0    1332.3     233.5 100000.00
       1.57      5.44      5.56       .00      .060      .080      .000      .000    353.00   4796.00
   .005606      264.      398.      281.         2         0         0       .00    235.00   5031.00


 *SECNO 374.000

 3470 ENCROACHMENT STATIONS=     4730.0    5094.6  TYPE=      1  TARGET=      364.600
    374.000     11.77    367.77       .00    366.96    368.11       .34      2.92       .04    364.80
     7800.0    2953.4    4689.3     157.3     649.3     974.7      79.0    1346.9     236.3    365.30
       1.59      4.55      4.81      1.99      .070      .120      .100      .000    356.00   4730.00
   .009498      397.      418.      377.         3         0         0       .00    364.60   5094.60


 *SECNO 376.000

 3470 ENCROACHMENT STATIONS=     4780.0    5075.0  TYPE=      1  TARGET=      295.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=       366.90 ELREA=    100000.00

    376.000     12.58    369.08       .00    368.77    369.38       .30      1.26       .01    366.90
     7800.0    1408.5    6391.5        .0     373.6    1417.1        .0    1352.6     237.1 100000.00
       1.60      3.77      4.51       .00      .070      .120      .000      .000    356.50   4780.00
   .007877       53.      184.       71.         3         0         0       .00    295.00   5075.00


1
   09AUG96      09:28:04                                                                                    PAGE   72

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 *SECNO 378.000
 BTCARD, BRIDGE STENCL=    4779.19   STENCR=    5079.89

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .41


 3370 NORMAL BRIDGE, NRD=  32 MIN ELTRD=   360.70 MAX ELLC=   367.10
```

```
3470 ENCROACHMENT STATIONS=     4790.0    5100.0  TYPE=      1  TARGET=      310.000
        D/S FACE UVAS ROAD BRIDGE
   378.000     12.93    369.53       .00    369.06    370.00       .47       .53       .09    367.60
    7800.0     622.5    6708.6     468.9     143.4    1194.4      84.1    1353.9     237.3    367.10
      1.60      4.34      5.62      5.57      .070      .120      .100      .000    356.60   4790.00
   .047227       32.       35.       13.        11         0         0   -527.33    310.00   5100.00


*SECNO 380.000
BTCARD, BRIDGE STENCL=    4752.89   STENCR=    5077.84

3370 NORMAL BRIDGE, NRD=  40 MIN ELTRD=   361.60 MAX ELLC=   367.30


3470 ENCROACHMENT STATIONS=     4765.0    5100.0  TYPE=      1  TARGET=      335.000
        U/S FACE UVAS ROAD BRIDGE
   380.000     13.50    370.60       .00    369.98    370.91       .32       .86       .05    367.60
    7800.0    2017.5    5774.6       8.0     451.2    1274.5       3.7    1354.7     237.5    367.30
      1.60      4.47      4.53      2.17      .070      .120      .100      .000    357.10   4765.00
   .027179       25.       25.       25.        11         0         0   -862.80    335.00   5100.00


*SECNO 382.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.36


3470 ENCROACHMENT STATIONS=     4560.0    4942.8  TYPE=      1  TARGET=      382.810
   382.000     14.16    371.26       .00    370.43    371.39       .13       .42       .06    367.40
    7800.0    1406.2    4144.0    2249.8     379.1    1492.8     940.8    1358.6     238.1    368.40
      1.61      3.71      2.78      2.39      .060      .120      .100      .000    357.10   4560.00
   .002412       33.       90.       66.         3         0         0       .00    382.81   4942.81


1
   09AUG96      09:28:04                                                                                                PAGE   73

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


CCHV=     .100 CEHV=     .300
*SECNO 384.000

3470 ENCROACHMENT STATIONS=     4715.0    5135.0  TYPE=      1  TARGET=      420.000
   384.000     14.08    372.38       .00    371.34    372.51       .13      1.11       .00    364.80
    7800.0    4256.4    3039.9     503.7    1247.2    1446.8     374.8    1399.8     243.9    369.70
      1.67      3.41      2.10      1.34      .060      .120      .100      .000    358.30   4715.00
   .001399       708.      519.      694.         4         0         0       .00    420.00   5135.00


*SECNO 386.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .61


3470 ENCROACHMENT STATIONS=     4725.0    5025.5  TYPE=      1  TARGET=      300.500
   386.000     13.80    373.40       .00    372.57    373.67       .28      1.12       .04    368.60
    7800.0    4715.5    3084.5        .0     972.2    1036.0        .0    1430.7     248.3 100000.00
      1.71      4.85      2.98       .00      .060      .120      .000      .000    359.60   4725.00
   .003798       491.      547.      656.         2         0         0       .00    300.50   5025.50


*SECNO 388.000

3470 ENCROACHMENT STATIONS=     4775.0    5047.5  TYPE=      1  TARGET=      272.540
   388.000     12.53    375.03       .00    374.02    375.22       .18      1.54       .01    367.70
    7800.0    2040.4    5759.6        .0     456.1    1916.6        .0    1453.7     251.3 100000.00
      1.74      4.47      3.01       .00      .060      .120      .000      .000    362.50   4775.00
   .002993       453.      461.      354.         2         0         0       .00    272.54   5047.54


*SECNO 390.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .57


3470 ENCROACHMENT STATIONS=     4806.0    5056.0  TYPE=      1  TARGET=      250.000
   390.000      7.69    377.29       .00    376.57    377.78       .49      2.47       .09    374.30
    7800.0        .5    7799.5        .0        .6    1392.9        .0    1475.6     254.4 100000.00
      1.77       .78      5.60       .00      .060      .080      .000      .000    369.60   4806.00
   .009296       539.      501.      466.         2         0         0       .00    250.00   5056.00


1
   09AUG96      09:28:04                                                                                                PAGE   74

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST
```

```
*SECNO 392.000

3470 ENCROACHMENT STATIONS=     4850.0    5150.0  TYPE=      1  TARGET=      300.000
   392.000      8.23    381.83       .00    381.52    382.25       .42      4.46       .01    379.20
    7800.0    1081.3    5197.4    1521.3     209.4    1015.7     281.0    1494.3     257.9    377.50
      1.80      5.17      5.12      5.41      .060      .080      .050      .000    373.60   4850.00
   .006865      445.      576.      519.         4         0         0       .00    300.00   5150.00


*SECNO 394.000

3470 ENCROACHMENT STATIONS=     4862.1    5076.9  TYPE=      1  TARGET=      214.780
   394.000      9.17    385.67       .00    385.59    386.24       .57      3.95       .05    383.10
    7800.0     203.4    7596.6        .0      53.8    1242.7        .0    1511.0     260.9 100000.00
      1.82      3.78      6.11       .00      .050      .080      .000      .000    376.50   4862.10
   .008466      513.      527.      460.         2         0         0       .00    214.78   5076.88


*SECNO 396.000

3470 ENCROACHMENT STATIONS=     4837.0    5059.8  TYPE=      1  TARGET=      222.750
   396.000     10.12    389.12       .00    388.96    389.46       .34      3.20       .02    384.50
    7800.0        .0    7800.0        .0        .0    1657.8        .0    1528.8     263.6 100000.00
      1.85       .00      4.70       .00      .000      .080      .000      .000    379.00   4837.00
   .004578      494.      527.      498.         2         0         0       .00    222.75   5059.75


*SECNO 398.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .62


3470 ENCROACHMENT STATIONS=     4960.0    5077.0  TYPE=      1  TARGET=      117.000
   398.000     11.74    392.24       .00    391.90    393.25      1.01      3.58       .20    391.70
    7800.0        .5    7799.5        .0        .3     968.4        .0    1544.3     265.6 100000.00
      1.87      1.40      8.05       .00      .050      .080      .000      .000    380.50   4960.00
   .011982      526.      513.      561.         2         0         0       .00    117.00   5077.00
```



```
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 400.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.87


3470 ENCROACHMENT STATIONS=     4871.0    5042.0  TYPE=      1  TARGET=      171.000
   400.000     14.47    395.67       .00    395.39    396.03       .36      2.72       .06    394.10
    7800.0        .5    7799.2        .3        .6    1620.9        .5    1558.2     267.1    393.90
      1.90       .81      4.81       .50      .050      .080      .070      .000    381.20   4871.00
   .003423      395.      468.      400.         2         0         0       .00    171.00   5042.00


*SECNO 402.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .61


3470 ENCROACHMENT STATIONS=     4922.0    5059.0  TYPE=      1  TARGET=      137.010
   402.000     10.52    398.22       .00    398.06    398.99       .77      2.84       .12 100000.00
    7800.0        .0    7800.0        .0        .0    1105.1        .0    1575.0     269.0 100000.00
      1.92       .00      7.06       .00      .000      .080      .000      .000    387.70   4922.00
   .009228      409.      536.      373.         2         0         0       .00    137.01   5059.01
```



```
                                                                                THIS RUN EXECUTED 09AUG96    09:28:09
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


UPPER UVAS CREEK
```

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	200.000	.00	.00	.00	229.60	13550.00	241.31	.00	242.84	37.86	9.92	1365.55	2202.31
	200.000	.00	.00	.00	229.60	13550.00	242.31	.00	243.57	27.25	9.01	1503.16	2595.54
	202.000	430.40	.00	.00	230.50	13550.00	242.94	.00	244.42	35.31	9.79	1384.07	2280.36
	202.000	430.40	.00	.00	230.50	13550.00	243.50	.00	244.90	31.51	9.50	1426.38	2413.69
	204.000	40.50	.00	.00	230.30	13550.00	243.00	.00	244.65	38.79	10.31	1314.59	2175.52
	204.000	40.50	.00	.00	230.30	13550.00	243.58	.00	245.08	32.05	9.85	1376.28	2393.61
	210.000	63.00	250.00	249.40	230.40	13550.00	243.10	.00	244.75	37.66	10.30	1315.95	2208.11
	210.000	63.00	250.00	249.40	230.40	13550.00	243.65	.00	245.13	31.70	9.76	1387.86	2406.48
*	212.000	42.10	.00	.00	230.80	13550.00	243.55	.00	245.05	118.25	9.83	1379.04	1246.06
*	212.000	42.10	.00	.00	230.80	13550.00	244.02	.00	245.39	102.67	9.40	1441.81	1337.30
*	214.000	369.60	.00	.00	233.00	13550.00	245.91	.00	246.04	7.53	2.50	4920.19	4937.85
*	214.000	369.60	.00	.00	233.00	13550.00	246.50	.00	246.70	12.98	3.41	3782.30	3760.54
	216.000	253.90	.00	.00	234.00	13550.00	246.13	.00	246.23	7.88	2.69	5223.46	4827.03
	216.000	253.90	.00	.00	234.00	13550.00	246.83	.00	247.05	13.80	3.71	3655.93	3647.18
*	218.000	303.10	.00	.00	236.00	13550.00	246.33	.00	246.93	74.63	6.20	2184.74	1568.46
*	218.000	303.10	.00	.00	236.00	13550.00	247.37	.00	247.82	47.37	5.40	2509.32	1968.70
*	220.000	400.70	.00	.00	236.10	13550.00	247.78	.00	247.91	11.39	2.63	4694.07	4014.75
*	220.000	400.70	.00	.00	236.10	13550.00	248.55	.00	248.71	12.27	2.89	4269.86	3867.93
*	222.000	399.70	.00	.00	239.50	10909.00	248.36	.00	248.55	30.39	3.68	3132.38	1978.90
*	222.000	399.70	.00	.00	239.50	10909.00	249.16	.00	249.44	33.84	4.20	2581.29	1875.26
	224.000	389.70	.00	.00	240.40	10909.00	249.75	.00	250.05	47.05	4.43	2575.81	1590.48
	224.000	389.70	.00	.00	240.40	10909.00	250.50	.00	250.75	32.91	4.00	2730.56	1901.66

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	226.000	527.90	.00	.00	242.60	10909.00	251.69	.00	251.89	24.16	3.92	3072.41	2219.46
	226.000	527.90	.00	.00	242.60	10909.00	252.24	.00	252.55	31.13	4.64	2446.77	1955.07
	228.000	425.50	.00	.00	244.50	10909.00	253.13	.00	253.40	47.49	4.72	2653.39	1583.02
	228.000	425.50	.00	.00	244.50	10909.00	253.98	.00	254.37	52.89	5.40	2230.58	1499.98
	230.000	360.90	.00	.00	247.40	10909.00	255.40	.00	255.77	84.51	5.39	2333.73	1186.68
	230.000	360.90	.00	.00	247.40	10909.00	256.38	.00	256.87	85.57	6.09	1953.86	1179.33
	232.000	209.60	.00	.00	247.50	10909.00	256.81	.00	257.11	56.60	5.11	2653.93	1450.07
	232.000	209.60	.00	.00	247.50	10909.00	257.84	.00	258.21	55.66	5.60	2300.46	1462.23
	234.000	304.60	.00	.00	247.60	10909.00	258.32	.00	258.67	50.59	4.91	2368.57	1533.70
	234.000	304.60	.00	.00	247.60	10909.00	259.33	.00	259.82	51.48	5.36	1960.28	1520.37
	236.000	306.20	.00	.00	248.50	10909.00	260.27	.00	260.61	67.79	4.82	2432.84	1324.91
	236.000	306.20	.00	.00	248.50	10909.00	261.29	.00	261.67	60.82	4.95	2224.81	1398.88
	238.000	228.10	.00	.00	251.60	10909.00	262.11	.00	262.48	93.33	5.31	2552.35	1129.21
	238.000	228.10	.00	.00	251.60	10909.00	262.94	.00	263.47	98.01	5.83	1872.98	1101.94
*	240.000	422.20	.00	.00	252.50	10909.00	263.40	.00	263.51	10.49	1.35	4765.00	3368.32
*	240.000	422.20	.00	.00	252.50	10909.00	264.36	.00	264.50	10.69	1.53	4008.68	3336.07
	242.000	510.10	.00	.00	254.40	10909.00	263.88	.00	263.96	7.26	1.25	5122.36	4049.22
	242.000	510.10	.00	.00	254.40	10909.00	264.85	.00	264.96	7.39	1.41	4464.29	4013.95
	244.000	435.00	.00	.00	254.90	10909.00	264.20	.00	264.31	8.27	1.13	4769.21	3794.02
	244.000	435.00	.00	.00	254.90	10909.00	265.19	.00	265.32	8.30	1.30	4196.61	3786.98
*	246.000	486.70	.00	.00	260.60	10909.00	265.36	265.36	266.30	239.51	4.43	1612.14	704.90
*	246.000	486.70	.00	.00	260.60	10909.00	265.77	265.77	267.26	397.81	6.28	1313.71	546.95
*	250.000	545.50	.00	.00	261.40	10909.00	269.18	.00	269.31	24.75	2.53	3858.35	2192.79
*	250.000	545.50	.00	.00	261.40	10909.00	270.09	.00	270.25	21.05	2.54	3436.08	2377.48
*	252.000	510.70	.00	.00	262.00	10909.00	271.14	.00	271.38	63.50	3.98	2827.72	1368.98
*	252.000	510.70	.00	.00	262.00	10909.00	271.84	.00	272.31	77.85	4.69	2013.13	1236.39
*	254.000	497.70	.00	.00	265.10	10909.00	273.52	.00	273.62	27.79	2.52	4197.30	2069.25
*	254.000	497.70	.00	.00	265.10	10909.00	274.52	.00	274.73	27.67	2.78	3071.55	2073.85
	256.000	497.00	.00	.00	267.10	10909.00	274.82	.00	274.94	40.45	2.98	4007.80	1715.25
	256.000	497.00	.00	.00	267.10	10909.00	275.81	.00	276.00	40.86	3.34	3131.02	1706.56
	258.000	530.60	.00	.00	269.60	10909.00	277.16	.00	277.25	26.20	2.11	4614.68	2131.35
	258.000	530.60	.00	.00	269.60	10909.00	278.16	.00	278.28	23.44	2.27	4048.37	2253.41
	260.000	208.50	.00	.00	271.80	10909.00	277.86	.00	277.98	40.95	2.63	4038.90	1704.82
	260.000	208.50	.00	.00	271.80	10909.00	278.81	.00	278.97	42.83	2.99	3457.81	1666.90

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	262.000	523.40	.00	.00	272.90	10909.00	279.89	.00	280.03	39.84	2.17	3750.45	1728.42
	262.000	523.40	.00	.00	272.90	10909.00	280.90	.00	281.06	39.61	2.56	3407.61	1733.41
*	264.000	483.10	.00	.00	274.30	10909.00	281.93	.00	282.18	84.76	3.77	2726.86	1184.89
	264.000	483.10	.00	.00	274.30	10909.00	282.77	.00	283.07	66.67	3.62	2572.00	1336.04
	266.000	505.20	.00	.00	275.30	10909.00	284.99	.00	285.26	50.21	3.83	2699.57	1539.57
	266.000	505.20	.00	.00	275.30	10909.00	285.53	.00	285.87	53.57	4.16	2378.79	1490.43
	268.000	516.90	.00	.00	275.60	10909.00	287.70	.00	287.98	29.39	3.63	2637.61	2012.24
	268.000	516.90	.00	.00	275.60	10909.00	288.17	.00	288.52	33.08	3.98	2406.76	1896.71
*	270.000	209.30	.00	.00	275.90	10909.00	289.05	.00	289.67	80.97	6.35	1729.94	1212.34
*	270.000	209.30	.00	.00	275.90	10909.00	289.70	.00	290.32	81.07	6.33	1723.82	1211.58
*	272.000	42.60	.00	.00	276.00	10362.00	289.53	.00	289.89	18.91	4.83	2144.90	2383.15
*	272.000	42.60	.00	.00	276.00	10362.00	290.22	.00	290.54	14.86	4.52	2291.22	2687.86
	280.000	58.40	292.10	289.00	276.00	10362.00	289.65	.00	289.98	15.08	4.55	2277.99	2668.73
	280.000	58.40	292.10	289.00	276.00	10362.00	290.39	.00	290.67	12.05	4.26	2430.34	2985.07
*	282.000	60.40	.00	.00	276.10	10362.00	289.84	.00	290.12	36.77	4.29	2471.97	1708.72
*	282.000	60.40	.00	.00	276.10	10362.00	290.50	.00	290.78	31.36	4.28	2422.73	1850.43
*	284.000	485.40	.00	.00	277.00	10362.00	292.32	.00	293.12	108.93	7.21	1445.15	992.80
*	284.000	485.40	.00	.00	277.00	10362.00	292.64	.00	293.55	109.54	7.64	1357.02	990.03
	286.000	508.10	.00	.00	279.40	8497.00	298.32	.00	299.41	141.76	8.36	1016.60	713.66
	286.000	508.10	.00	.00	279.40	8497.00	298.48	.00	299.57	128.09	8.37	1015.70	750.78
*	288.000	400.10	.00	.00	282.80	8497.00	300.34	.00	300.45	9.25	3.02	3444.65	2793.93
*	288.000	400.10	.00	.00	282.80	8497.00	300.90	.00	301.20	18.55	4.40	1940.12	1972.87
	290.000	442.00	.00	.00	283.00	8497.00	300.79	.00	300.95	14.85	3.58	2856.24	2204.71
	290.000	442.00	.00	.00	283.00	8497.00	301.71	.00	301.90	13.74	3.63	2486.74	2292.39
	292.000	443.50	.00	.00	285.60	8497.00	301.43	.00	301.55	13.94	2.94	3037.61	2275.73
	292.000	443.50	.00	.00	285.60	8497.00	302.38	.00	302.56	17.07	3.47	2568.92	2056.87
	294.000	539.30	.00	.00	286.40	8497.00	302.27	.00	302.54	26.33	4.58	2199.54	1655.85
	294.000	539.30	.00	.00	286.40	8497.00	303.30	.00	303.55	20.41	4.28	2197.42	1880.91
*	296.000	506.00	.00	.00	289.00	8497.00	304.10	.00	304.87	95.42	7.77	1357.17	869.88
*	296.000	506.00	.00	.00	289.00	8497.00	304.69	.00	305.71	106.04	8.50	1118.59	825.14
	298.000	509.10	.00	.00	294.00	8497.00	308.00	.00	308.46	57.98	5.86	1721.27	1115.86
*	298.000	509.10	.00	.00	294.00	8497.00	308.87	.00	309.40	53.40	5.97	1493.70	1162.74
	300.000	498.60	.00	.00	295.30	8497.00	310.89	.00	311.48	62.09	6.66	1567.58	1078.33
	300.000	498.60	.00	.00	295.30	8497.00	311.66	.00	312.44	66.83	7.22	1242.19	1039.42

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	302.000	527.90	.00	.00	298.30	8497.00	314.46	.00	315.07	73.00	6.91	1490.11	994.52
	302.000	527.90	.00	.00	298.30	8497.00	315.43	.00	316.19	75.00	7.42	1304.31	981.13
	304.000	544.30	.00	.00	303.30	8497.00	318.25	.00	318.68	60.16	6.14	1730.98	1095.46
	304.000	544.30	.00	.00	303.30	8497.00	319.24	.00	319.70	55.11	6.24	1716.89	1144.55
*	306.000	516.90	.00	.00	308.10	8497.00	320.68	.00	320.88	28.95	3.95	2380.25	1579.16
	306.000	516.90	.00	.00	308.10	8497.00	321.61	.00	321.89	31.13	4.37	1994.31	1522.91
*	308.000	538.10	.00	.00	311.90	8497.00	323.18	.00	323.95	110.04	7.46	1273.95	810.03
*	308.000	538.10	.00	.00	311.90	8497.00	323.95	.00	324.43	64.15	6.07	1633.68	1060.87
*	310.000	535.60	.00	.00	316.50	8497.00	327.36	.00	327.77	40.50	4.56	1765.42	1335.24
	310.000	535.60	.00	.00	316.50	8497.00	327.26	.00	327.75	48.89	4.96	1581.66	1215.27
	312.000	502.20	.00	.00	317.00	8497.00	330.32	.00	330.64	43.77	4.93	2013.81	1284.34
	312.000	502.20	.00	.00	317.00	8497.00	330.58	.00	331.03	49.51	5.39	1592.55	1207.60
	314.000	504.50	.00	.00	318.60	8497.00	332.87	.00	333.12	41.24	4.54	2281.82	1323.14
	314.000	504.50	.00	.00	318.60	8497.00	333.59	.00	334.10	63.34	5.97	1534.91	1067.68
*	316.000	591.40	.00	.00	323.00	8497.00	334.37	.00	334.86	20.21	6.50	1848.06	1889.86
*	316.000	591.40	.00	.00	323.00	8497.00	335.40	.00	335.98	18.60	6.68	1525.47	1970.44
	318.000	35.50	330.40	331.00	324.70	8497.00	334.51	.00	334.97	29.86	4.78	1572.46	1554.96
	318.000	35.50	330.40	331.00	324.70	8497.00	335.39	.00	336.20	36.03	5.65	1253.05	1415.62
*	320.000	43.80	331.10	331.00	324.90	8497.00	334.50	.00	335.40	98.09	8.47	1127.62	857.93
	320.000	43.80	331.10	331.00	324.90	8497.00	335.48	.00	336.49	62.07	7.28	1068.73	1078.55
	322.000	60.30	.00	.00	325.00	8497.00	335.34	.00	335.98	110.24	7.57	1447.56	809.28
	322.000	60.30	.00	.00	325.00	8497.00	336.35	.00	336.93	72.83	6.67	1417.42	995.63
*	324.000	511.20	.00	.00	328.10	8497.00	338.07	.00	338.30	33.39	3.98	2277.34	1470.54
	324.000	511.20	.00	.00	328.10	8497.00	338.85	.00	339.26	43.78	4.88	1714.42	1284.21

	326.000	217.30	.00	.00	330.50	8497.00	339.02	.00	339.38	42.77	6.13	2037.09	1299.26
	326.000	217.30	.00	.00	330.50	8497.00	339.94	.00	340.50	45.05	6.80	1471.98	1266.00
	328.000	508.50	.00	.00	330.70	8497.00	341.64	.00	342.40	63.65	7.59	1378.03	1065.06
	328.000	508.50	.00	.00	330.70	8497.00	342.61	.00	343.64	67.06	8.28	1060.97	1037.64
	330.000	385.50	.00	.00	331.20	8497.00	343.94	.00	344.81	56.42	8.21	1321.07	1131.24
	330.000	385.50	.00	.00	331.20	8497.00	344.94	.00	346.08	56.92	8.81	1035.34	1126.25
*	332.000	45.50	341.40	342.50	331.30	8497.00	343.97	343.97	345.77	129.16	11.36	815.86	747.64
	332.000	45.50	341.40	342.50	331.30	8497.00	344.92	.00	346.70	94.09	10.48	854.07	875.99
*	340.000	20.00	341.40	342.50	331.30	8497.00	345.17	.00	346.17	56.43	8.26	1087.56	1131.09
*	340.000	20.00	341.40	342.50	331.30	8497.00	346.03	.00	347.05	41.97	7.57	1132.53	1311.60

1
09AUG96 09:28:04 PAGE 80

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	342.000	45.20	.00	.00	331.30	8497.00	346.27	.00	346.54	21.79	4.40	2053.73	1820.46
	342.000	45.20	.00	.00	331.30	8497.00	347.00	.00	347.39	25.98	5.00	1701.65	1667.17
	344.000	502.40	.00	.00	331.80	8497.00	347.29	.00	347.62	19.54	4.60	1922.27	1922.45
	344.000	502.40	.00	.00	331.80	8497.00	348.12	.00	348.44	16.33	4.38	1883.73	2102.89
*	346.000	495.20	.00	.00	334.80	8497.00	348.50	.00	349.37	64.84	6.72	1256.25	1055.20
*	346.000	495.20	.00	.00	334.80	8497.00	349.06	.00	350.18	78.24	7.43	1023.66	960.61
	348.000	263.40	.00	.00	336.30	8497.00	350.56	.00	351.26	64.25	6.48	1302.59	1060.09
	348.000	263.40	.00	.00	336.30	8497.00	351.48	.00	352.26	66.67	7.00	1196.28	1040.63
*	350.000	225.50	.00	.00	337.50	7800.00	351.90	.00	352.15	24.36	3.99	1984.75	1580.33
*	350.000	225.50	.00	.00	337.50	7800.00	352.83	.00	353.03	17.85	3.63	2148.16	1845.96
*	352.000	430.20	.00	.00	344.00	7800.00	353.68	.00	354.42	127.88	7.06	1188.98	689.74
*	352.000	430.20	.00	.00	344.00	7800.00	354.14	.00	354.88	114.49	6.94	1124.34	728.98
*	354.000	432.60	.00	.00	345.00	7800.00	357.56	.00	358.11	58.17	6.14	1431.34	1022.67
	354.000	432.60	.00	.00	345.00	7800.00	357.83	.00	358.47	61.85	6.45	1216.32	991.78
	356.000	259.00	.00	.00	345.50	7800.00	358.99	.00	359.44	39.80	5.73	1495.72	1236.32
	356.000	259.00	.00	.00	345.50	7800.00	359.35	.00	359.77	34.35	5.44	1568.67	1330.87
*	358.000	48.50	353.40	352.70	346.80	7800.00	359.03	.00	360.18	295.75	7.27	1050.03	453.56
*	358.000	48.50	353.40	352.70	346.80	7800.00	359.36	.00	360.41	244.17	6.75	1113.97	499.17
*	360.000	20.00	353.40	352.70	346.80	7800.00	360.18	.00	360.68	97.41	4.47	1463.99	790.29
	360.000	20.00	353.40	352.70	346.80	7800.00	360.09	.00	360.88	155.93	5.63	1268.61	624.64
*	362.000	37.80	.00	.00	347.00	7800.00	360.51	.00	360.94	47.15	6.02	1616.99	1135.91
*	362.000	37.80	.00	.00	347.00	7800.00	360.66	.00	361.26	58.83	6.79	1361.94	1016.93
	364.000	120.90	.00	.00	347.90	7800.00	361.26	.00	361.70	45.86	5.57	1614.12	1151.79
	364.000	120.90	.00	.00	347.90	7800.00	361.70	.00	362.08	37.43	5.18	1732.25	1274.89
	366.000	108.10	.00	.00	350.10	7800.00	362.16	.00	362.62	63.73	6.20	1736.31	977.05
	366.000	108.10	.00	.00	350.10	7800.00	362.46	.00	362.88	54.26	5.85	1748.54	1058.89
	370.000	127.20	353.70	353.90	350.70	7800.00	363.33	.00	363.47	32.74	2.52	2746.80	1363.11
	370.000	127.20	353.70	353.90	350.70	7800.00	363.49	.00	363.67	34.57	2.61	2357.75	1326.58
	371.000	15.00	353.70	353.90	350.70	7800.00	363.38	.00	363.52	31.51	2.48	2788.44	1389.43
	371.000	15.00	353.70	353.90	350.70	7800.00	363.55	.00	363.72	33.65	2.58	2377.20	1344.63
	372.000	397.80	.00	.00	353.00	7800.00	364.32	.00	364.57	36.47	4.36	1940.21	1291.52
	372.000	397.80	.00	.00	353.00	7800.00	364.69	.00	365.15	56.06	5.56	1421.62	1041.79
*	374.000	417.80	.00	.00	356.00	7800.00	366.96	.00	367.46	169.51	5.99	1407.42	599.10
	374.000	417.80	.00	.00	356.00	7800.00	367.77	.00	368.11	94.98	4.81	1702.91	800.33

1
09AUG96 09:28:04 PAGE 81

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	376.000	183.70	.00	.00	356.50	7800.00	368.77	.00	368.97	64.94	3.89	2190.59	967.92
	376.000	183.70	.00	.00	356.50	7800.00	369.08	.00	369.38	78.77	4.51	1790.74	878.84
*	378.000	34.50	360.70	367.10	356.60	7800.00	369.06	.00	369.49	404.61	5.23	1499.61	387.77
*	378.000	34.50	360.70	367.10	356.60	7800.00	369.53	.00	370.00	472.27	5.62	1421.82	358.92
	380.000	24.50	361.60	367.30	357.10	7800.00	369.98	.00	370.26	221.08	4.06	1877.98	524.59
	380.000	24.50	361.60	367.30	357.10	7800.00	370.60	.00	370.91	271.79	4.53	1729.35	473.13
*	382.000	89.90	.00	.00	357.10	7800.00	370.43	.00	370.51	11.15	1.78	3686.63	2335.54
*	382.000	89.90	.00	.00	357.10	7800.00	371.26	.00	371.39	24.12	2.78	2812.72	1588.10
	384.000	518.70	.00	.00	358.30	7800.00	371.34	.00	371.47	20.75	2.38	2871.13	1712.21
	384.000	518.70	.00	.00	358.30	7800.00	372.38	.00	372.51	13.99	2.10	3068.80	2085.20
	386.000	546.70	.00	.00	359.60	7800.00	372.57	.00	372.75	29.65	2.46	2402.62	1432.56
*	386.000	546.70	.00	.00	359.60	7800.00	373.40	.00	373.67	37.98	2.98	2008.18	1265.65

	388.000	460.50	.00	.00	362.50	7800.00	374.02	.00	374.17	32.24	2.90	2529.96	1373.79
	388.000	460.50	.00	.00	362.50	7800.00	375.03	.00	375.22	29.93	3.01	2372.68	1425.68
*	390.000	501.40	.00	.00	369.60	7800.00	376.57	.00	377.01	108.69	5.54	1501.54	748.16
*	390.000	501.40	.00	.00	369.60	7800.00	377.29	.00	377.78	92.96	5.60	1393.51	809.00
	392.000	576.40	.00	.00	373.60	7800.00	381.52	.00	381.93	74.38	5.14	1527.39	904.43
	392.000	576.40	.00	.00	373.60	7800.00	381.83	.00	382.25	68.65	5.12	1506.01	941.41
	394.000	526.60	.00	.00	376.50	7800.00	385.59	.00	386.18	88.23	6.19	1279.59	830.38
	394.000	526.60	.00	.00	376.50	7800.00	385.67	.00	386.24	84.66	6.11	1296.52	847.71
*	396.000	527.10	.00	.00	379.00	7800.00	388.96	.00	389.27	41.51	4.48	1743.63	1210.58
	396.000	527.10	.00	.00	379.00	7800.00	389.12	.00	389.46	45.78	4.70	1657.84	1152.78
*	398.000	512.50	.00	.00	380.50	7800.00	391.90	.00	392.87	121.61	8.05	1034.94	707.32
*	398.000	512.50	.00	.00	380.50	7800.00	392.24	.00	393.25	119.82	8.05	968.73	712.57
*	400.000	467.50	.00	.00	381.20	7800.00	395.39	.00	395.75	36.04	4.84	1688.06	1299.26
*	400.000	467.50	.00	.00	381.20	7800.00	395.67	.00	396.03	34.23	4.81	1622.10	1333.19
*	402.000	536.20	.00	.00	387.70	7800.00	398.06	.00	398.85	96.81	7.15	1101.46	792.73
*	402.000	536.20	.00	.00	387.70	7800.00	398.22	.00	398.99	92.28	7.06	1105.08	811.99

1

UPPER UVAS CREEK

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	200.000	13550.00	241.31	.00	.00	.00	146.42	.00
	200.000	13550.00	242.31	1.00	.00	1.00	141.93	.00
	202.000	13550.00	242.94	.00	1.63	.00	134.14	430.40
	202.000	13550.00	243.50	.56	1.19	.56	131.54	430.40
	204.000	13550.00	243.00	.00	.07	.00	134.70	40.50
	204.000	13550.00	243.58	.57	.08	.57	127.06	40.50
	210.000	13550.00	243.10	.00	.09	.00	131.05	63.00
	210.000	13550.00	243.65	.55	.08	.55	130.00	63.00
*	212.000	13550.00	243.55	.00	.45	.00	135.26	42.10
*	212.000	13550.00	244.02	.47	.36	.47	135.00	42.10
*	214.000	13550.00	245.91	.00	2.36	.00	577.45	369.60
*	214.000	13550.00	246.50	.59	2.48	.59	416.08	369.60
	216.000	13550.00	246.13	.00	.21	.00	797.85	253.90
	216.000	13550.00	246.83	.70	.33	.70	375.00	253.90
*	218.000	13550.00	246.33	.00	.20	.00	314.74	303.10
*	218.000	13550.00	247.37	1.04	.54	1.04	314.31	303.10
*	220.000	13550.00	247.78	.00	1.45	.00	936.17	400.70
*	220.000	13550.00	248.55	.77	1.17	.77	500.04	400.70
*	222.000	10909.00	248.36	.00	.58	.00	930.34	399.70
*	222.000	10909.00	249.16	.80	.62	.80	390.00	399.70
	224.000	10909.00	249.75	.00	1.39	.00	743.83	389.70
	224.000	10909.00	250.50	.75	1.34	.75	410.00	389.70
	226.000	10909.00	251.69	.00	1.95	.00	654.16	527.90
	226.000	10909.00	252.24	.55	1.74	.55	385.00	527.90
	228.000	10909.00	253.13	.00	1.44	.00	785.04	425.50
	228.000	10909.00	253.98	.85	1.74	.85	472.00	425.50
	230.000	10909.00	255.40	.00	2.27	.00	1030.48	360.90
	230.000	10909.00	256.38	.98	2.40	.98	463.00	360.90
	232.000	10909.00	256.81	.00	1.41	.00	883.72	209.60
	232.000	10909.00	257.84	1.03	1.46	1.03	531.00	209.60
	234.000	10909.00	258.32	.00	1.51	.00	575.38	304.60
	234.000	10909.00	259.33	1.01	1.49	1.01	269.00	304.60

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	236.000	10909.00	260.27	.00	1.95	.00	1163.45	306.20
	236.000	10909.00	261.29	1.03	1.96	1.03	300.00	306.20
	238.000	10909.00	262.11	.00	1.84	.00	1199.09	228.10
	238.000	10909.00	262.94	.83	1.64	.83	235.00	228.10
*	240.000	10909.00	263.40	.00	1.29	.00	1287.53	422.20
*	240.000	10909.00	264.36	.96	1.42	.96	576.00	422.20

	242.000	10909.00	263.88	.00	.47	.00	979.04	510.10
	242.000	10909.00	264.85	.97	.49	.97	589.00	510.10
	244.000	10909.00	264.20	.00	.32	.00	1101.64	435.00
	244.000	10909.00	265.19	.99	.34	.99	606.00	435.00
*	246.000	10909.00	265.36	.00	1.16	.00	725.41	486.70
*	246.000	10909.00	265.77	.41	.59	.41	400.25	486.70
*	250.000	10909.00	269.18	.00	3.82	.00	1309.22	545.50
*	250.000	10909.00	270.09	.90	4.31	.90	650.00	545.50
*	252.000	10909.00	271.14	.00	1.96	.00	1202.24	510.70
*	252.000	10909.00	271.84	.70	1.76	.70	406.00	510.70
*	254.000	10909.00	273.52	.00	2.37	.00	1630.90	497.70
*	254.000	10909.00	274.52	1.00	2.68	1.00	567.21	497.70
	256.000	10909.00	274.82	.00	1.30	.00	1646.56	497.00
	256.000	10909.00	275.81	.99	1.29	.99	766.00	497.00
	258.000	10909.00	277.16	.00	2.34	.00	1691.66	530.60
	258.000	10909.00	278.16	1.00	2.35	1.00	1040.00	530.60
	260.000	10909.00	277.86	.00	.70	.00	1559.91	208.50
	260.000	10909.00	278.81	.95	.65	.95	978.33	208.50
	262.000	10909.00	279.89	.00	2.02	.00	1443.51	523.40
	262.000	10909.00	280.90	1.01	2.08	1.01	995.00	523.40
*	264.000	10909.00	281.93	.00	2.04	.00	1087.57	483.10
	264.000	10909.00	282.77	.85	1.87	.85	686.22	483.10
	266.000	10909.00	284.99	.00	3.06	.00	694.21	505.20
	266.000	10909.00	285.53	.54	2.75	.54	498.00	505.20
	268.000	10909.00	287.70	.00	2.71	.00	390.98	516.90
	268.000	10909.00	288.17	.48	2.65	.48	308.00	516.90
*	270.000	10909.00	289.05	.00	1.35	.00	167.55	209.30
*	270.000	10909.00	289.70	.65	1.53	.65	144.60	209.30

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	272.000	10362.00	289.53	.00	.48	.00	222.49	42.60
*	272.000	10362.00	290.22	.69	.52	.69	216.00	42.60
	280.000	10362.00	289.65	.00	.12	.00	215.43	58.40
	280.000	10362.00	290.39	.73	.16	.73	211.60	58.40
*	282.000	10362.00	289.84	.00	.19	.00	317.00	60.40
*	282.000	10362.00	290.50	.65	.11	.65	200.00	60.40
*	284.000	10362.00	292.32	.00	2.47	.00	152.74	485.40
*	284.000	10362.00	292.64	.33	2.15	.33	110.00	485.40
	286.000	8497.00	298.32	.00	6.01	.00	85.53	508.10
	286.000	8497.00	298.48	.16	5.84	.16	75.00	508.10
*	288.000	8497.00	300.34	.00	2.01	.00	707.34	400.10
*	288.000	8497.00	300.90	.56	2.42	.56	170.00	400.10
	290.000	8497.00	300.79	.00	.45	.00	704.83	442.00
	290.000	8497.00	301.71	.92	.82	.92	300.00	442.00
	292.000	8497.00	301.43	.00	.63	.00	653.19	443.50
	292.000	8497.00	302.38	.95	.66	.95	366.80	443.50
	294.000	8497.00	302.27	.00	.84	.00	585.06	539.30
	294.000	8497.00	303.30	1.03	.92	1.03	383.89	539.30
*	296.000	8497.00	304.10	.00	1.83	.00	518.79	506.00
*	296.000	8497.00	304.69	.59	1.39	.59	249.96	506.00
	298.000	8497.00	308.00	.00	3.90	.00	510.22	509.10
*	298.000	8497.00	308.87	.87	4.19	.87	217.44	509.10
	300.000	8497.00	310.89	.00	2.89	.00	478.71	498.60
	300.000	8497.00	311.66	.77	2.79	.77	174.53	498.60
	302.000	8497.00	314.46	.00	3.57	.00	549.66	527.90
	302.000	8497.00	315.43	.96	3.77	.96	309.52	527.90
	304.000	8497.00	318.25	.00	3.78	.00	565.03	544.30
	304.000	8497.00	319.24	.99	3.81	.99	488.11	544.30
*	306.000	8497.00	320.68	.00	2.43	.00	640.24	516.90
	306.000	8497.00	321.61	.93	2.37	.93	392.28	516.90
*	308.000	8497.00	323.18	.00	2.51	.00	385.83	538.10
*	308.000	8497.00	323.95	.76	2.34	.76	590.00	538.10

*	310.000	8497.00	327.36	.00	4.18	.00	459.62	535.60
	310.000	8497.00	327.26	-.10	3.31	-.10	375.00	535.60

1
09AUG96 09:28:04 PAGE 85

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	312.000	8497.00	330.32	.00	2.96	.00	694.13	502.20
	312.000	8497.00	330.58	.26	3.32	.26	250.00	502.20
	314.000	8497.00	332.87	.00	2.55	.00	916.08	504.50
	314.000	8497.00	333.59	.72	3.00	.72	305.00	504.50
*	316.000	8497.00	334.37	.00	1.50	.00	538.92	591.40
*	316.000	8497.00	335.40	1.03	1.81	1.03	205.00	591.40
	318.000	8497.00	334.51	.00	.13	.00	548.91	35.50
	318.000	8497.00	335.39	.88	-.01	.88	274.73	35.50
*	320.000	8497.00	334.50	.00	-.01	.00	554.80	43.80
	320.000	8497.00	335.48	.99	.09	.99	259.80	43.80
	322.000	8497.00	335.34	.00	.84	.00	526.07	60.30
	322.000	8497.00	336.35	1.01	.87	1.01	262.25	60.30
*	324.000	8497.00	338.07	.00	2.73	.00	711.70	511.20
	324.000	8497.00	338.85	.78	2.50	.78	300.00	511.20
	326.000	8497.00	339.02	.00	.95	.00	759.70	217.30
	326.000	8497.00	339.94	.92	1.08	.92	231.00	217.30
	328.000	8497.00	341.64	.00	2.63	.00	350.61	508.50
	328.000	8497.00	342.61	.96	2.67	.96	135.00	508.50
	330.000	8497.00	343.94	.00	2.29	.00	285.50	385.50
	330.000	8497.00	344.94	1.00	2.33	1.00	119.00	385.50
*	332.000	8497.00	343.97	.00	.03	.00	256.57	45.50
	332.000	8497.00	344.92	.95	-.02	.95	165.00	45.50
*	340.000	8497.00	345.17	.00	1.20	.00	262.70	20.00
*	340.000	8497.00	346.03	.86	1.11	.86	180.00	20.00
*	342.000	8497.00	346.27	.00	1.10	.00	333.83	45.20
	342.000	8497.00	347.00	.73	.97	.73	200.00	45.20
	344.000	8497.00	347.29	.00	1.02	.00	321.45	502.40
	344.000	8497.00	348.12	.83	1.12	.83	192.81	502.40
*	346.000	8497.00	348.50	.00	1.21	.00	286.93	495.20
*	346.000	8497.00	349.06	.56	.95	.56	114.00	495.20
	348.000	8497.00	350.56	.00	2.06	.00	268.54	263.40
	348.000	8497.00	351.48	.91	2.41	.91	127.00	263.40
*	350.000	7800.00	351.90	.00	1.33	.00	376.99	225.50
*	350.000	7800.00	352.83	.93	1.35	.93	211.52	225.50

1
09AUG96 09:28:04 PAGE 86

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	352.000	7800.00	353.68	.00	1.78	.00	278.49	430.20
*	352.000	7800.00	354.14	.46	1.31	.46	170.14	430.20
*	354.000	7800.00	357.56	.00	3.88	.00	283.64	432.60
	354.000	7800.00	357.83	.26	3.69	.26	131.00	432.60
	356.000	7800.00	358.99	.00	1.43	.00	200.00	259.00
	356.000	7800.00	359.35	.37	1.53	.37	200.00	259.00
*	358.000	7800.00	359.03	.00	.04	.00	191.00	48.50
*	358.000	7800.00	359.36	.34	.01	.34	191.00	48.50
*	360.000	7800.00	360.18	.00	1.15	.00	270.00	20.00
	360.000	7800.00	360.09	-.09	.73	-.09	200.00	20.00
*	362.000	7800.00	360.51	.00	.33	.00	290.00	37.80
*	362.000	7800.00	360.66	.16	.57	.16	205.00	37.80
	364.000	7800.00	361.26	.00	.75	.00	350.00	120.90
	364.000	7800.00	361.70	.44	1.03	.44	300.00	120.90
	366.000	7800.00	362.16	.00	.90	.00	507.06	108.10
	366.000	7800.00	362.46	.30	.76	.30	340.00	108.10
	370.000	7800.00	363.33	.00	1.17	.00	680.83	127.20
	370.000	7800.00	363.49	.17	1.03	.17	352.00	127.20
	371.000	7800.00	363.38	.00	.05	.00	686.09	15.00
	371.000	7800.00	363.55	.17	.05	.17	352.00	15.00
	372.000	7800.00	364.32	.00	.93	.00	406.23	397.80

	372.000	7800.00	364.69	.37	1.14	.37	235.00	397.80
*	374.000	7800.00	366.96	.00	2.65	.00	364.60	417.80
	374.000	7800.00	367.77	.81	3.09	.81	364.60	417.80
*	376.000	7800.00	368.77	.00	1.81	.00	440.00	183.70
	376.000	7800.00	369.08	.32	1.31	.32	295.00	183.70
*	378.000	7800.00	369.06	.00	.29	.00	420.00	34.50
*	378.000	7800.00	369.53	.47	.45	.47	310.00	34.50
	380.000	7800.00	369.98	.00	.92	.00	470.00	24.50
	380.000	7800.00	370.60	.61	1.07	.61	335.00	24.50
*	382.000	7800.00	370.43	.00	.45	.00	573.81	89.90
*	382.000	7800.00	371.26	.84	.67	.84	382.81	89.90
	384.000	7800.00	371.34	.00	.91	.00	611.34	518.70
	384.000	7800.00	372.38	1.04	1.12	1.04	420.00	518.70

1

09AUG96 09:28:04 PAGE 87

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	386.000	7800.00	372.57	.00	1.23	.00	472.68	546.70
*	386.000	7800.00	373.40	.83	1.02	.83	300.50	546.70
	388.000	7800.00	374.02	.00	1.44	.00	459.55	460.50
	388.000	7800.00	375.03	1.02	1.64	1.02	272.54	460.50
*	390.000	7800.00	376.57	.00	2.56	.00	496.24	501.40
*	390.000	7800.00	377.29	.72	2.26	.72	250.00	501.40
	392.000	7800.00	381.52	.00	4.95	.00	383.53	576.40
	392.000	7800.00	381.83	.31	4.54	.31	300.00	576.40
	394.000	7800.00	385.59	.00	4.07	.00	214.78	526.60
	394.000	7800.00	385.67	.08	3.84	.08	214.78	526.60
*	396.000	7800.00	388.96	.00	3.37	.00	260.75	527.10
	396.000	7800.00	389.12	.16	3.45	.16	222.75	527.10
*	398.000	7800.00	391.90	.00	2.94	.00	258.75	512.50
*	398.000	7800.00	392.24	.34	3.12	.34	117.00	512.50
*	400.000	7800.00	395.39	.00	3.49	.00	303.49	467.50
*	400.000	7800.00	395.67	.28	3.43	.28	171.00	467.50
*	402.000	7800.00	398.06	.00	2.67	.00	155.72	536.20
*	402.000	7800.00	398.22	.16	2.55	.16	137.01	536.20

1

09AUG96 09:28:04 PAGE 88

SUMMARY OF ERRORS AND SPECIAL NOTES

```
WARNING SECNO=    212.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    212.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    214.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    214.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    218.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    218.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    220.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    220.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    222.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    222.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    240.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    240.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=    246.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    246.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    246.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=    246.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    246.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=    246.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=    250.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    250.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    252.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    252.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    254.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    254.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    264.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
 WARNING SECNO=    270.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    270.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    272.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    272.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    282.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    282.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    284.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    284.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    288.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    288.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   09AUG96      09:28:04                                                                    PAGE   89


 WARNING SECNO=    296.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    296.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    298.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    306.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    308.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    308.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    310.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    316.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    316.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    320.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    324.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=    332.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=    332.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=    340.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    340.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    342.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    346.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    346.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    350.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    350.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    352.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    352.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    354.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    358.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    358.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    360.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    362.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    362.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    374.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    376.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    378.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    378.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    382.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   09AUG96      09:28:04                                                                    PAGE   90


 WARNING SECNO=    382.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    386.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    390.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    390.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    396.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    398.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    398.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    400.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    400.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=    402.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=    402.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

CALCULATIONS

CALCULATIONS INDEX

Santa Clara, California

(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

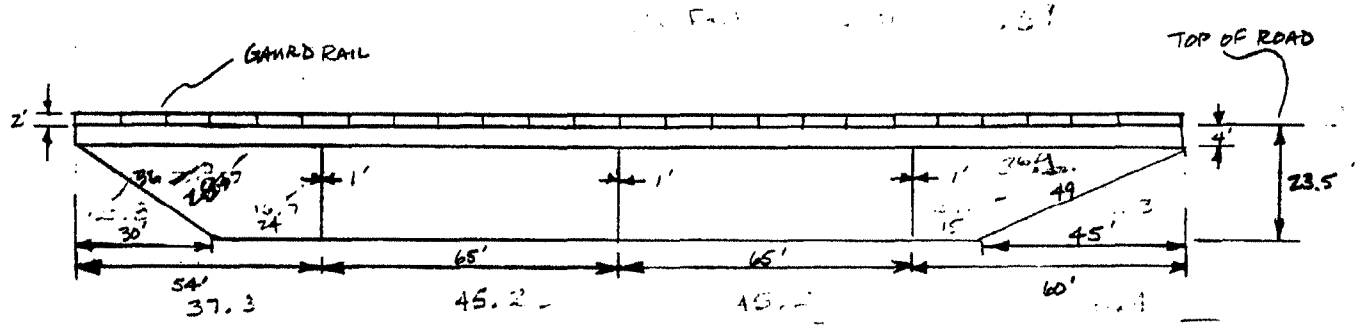
STREAM NAME	DESCRIPTION	FILE NAME	PAGE NUMBER
Upper Uvas	Hecker Pass Calculations	002.pdf	N/A
Upper Uvas	Watsonville Rd. Calcs.	003.pdf	
Upper Uvas	Old Creek Rd. Calcs.	004.pdf	
Upper Uvas	Heritage Way Calcs.	005.pdf	
Upper Uvas	Thousand Trails RV Park Calcs.	006.pdf	
Upper Uvas	Thousand Trails RV Park Calcs.	007.pdf	
Upper Uvas	Uvas Rd. Calcs.	008.pdf	

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/4/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS [HECKER PASS BRIDGE GEOMETRY]

HECKER PASS FLOW LENGTH = 49'



TRAPEZOIDAL AREA

LOW CHORD = 249.9

BOTTOM ELEV = 230.4

$$A = (169 \times 19.5) + \tfrac{1}{2}[30 \times 19.5] + \tfrac{1}{2}[45 \times 19.5] = 4{,}026.75 \text{ SF}$$

WET PERIMETER

WP = 254

$$R = \frac{A}{WP} = 15.85$$

DETERMINE XKOR

INTAKE COEFF. K_i, IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE $K_i = K_o \times K_s$

ENTRANCE LOSS; CANNOT USE BOX CULVERT FORMULA $D = \frac{2h+b}{3}$ B/C OF SIDE SLOPES ∴ USE THE HEIGHT OF THE OPENING.

$$R/D = 15.85/19 = 0.83$$

USING THE NOLTE CHART $K_o = 0.1$

$K_s = 1.0$ [NO WING WALLS]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/4/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS [HECKER PASS]

CONTINUED

ENTRANCE LOSS $K_e = K_o \times K_s$

$K_e = 0.1 \times 1.0 = 0.1$ .45

FRICTION LOSS COEFF; K_f

$K_f = \frac{29.1\, n^2 L}{R^{4/3}}$ $n = 0.04$ $L = 49$ $R = 15.85$

$K_f = \frac{29.1\,(0.04)^2\, 49}{(15.85)^{4/3}} = 0.0573$

$XKOR = K_e + K_f + 1$

$XKOR = 0.1 + 0.0573 + 1 = \underline{\underline{1.157}}$ 1.5

COEFF. OF DISCHARGE; COFQ = 2.6

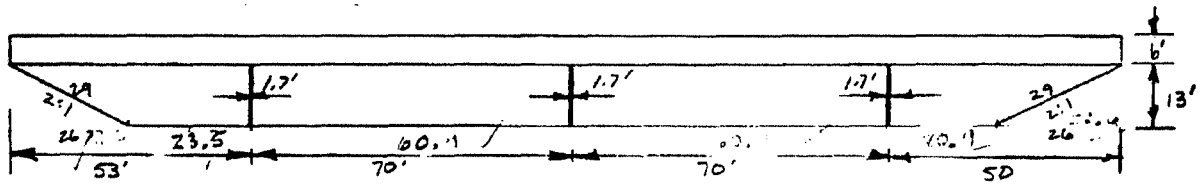
PIER SHAPE COEFFICIENT, XK = 1.05 [90° TRIANGLAR NOSE & TAIL]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY DA

SUBJECT SCALES - UPPER UVAS [WATSONVILLE ROAD]

FLOW LENGTH = 38.5'



TRAPIZOIDAL AREA

LOW CHORD = 289.0
BOTTOM ELEV = 276.0

$$A = (13 \times 191) + 2\left[\tfrac{1}{2}(26 \times 13)\right] = 2{,}821 \text{ SF}$$

WET PERIMETER

WP = 249

$$R = A/WP = \frac{2821}{249} = 11.3$$

DETERMINE K1 & K2

INTAKE COEFF. K_i, IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE $K_i = K_o \times K_s$

ENTRANCE LOSS; CANNOT USE BOX CULVERT FORMULA $D = \frac{2h+b}{3}$ B/C OF TRAPIZOIDAL SECTION, ∴ USE THE HEIGHT OF THE OPENING.

$$\rightarrow R/D = \frac{11.3}{13.0} = 0.869$$

USING THE NOLTE CHART $K_o = 0.1$

$K_s = 1.0$ [NO WING WALLS]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6-5-91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS [WATSONVILLE ROAD]

CONTINUED

ENTRANCE LOSS $K_e = K_o \times K_s$

$K_e = 0.1 \times 1.0 = 0.1$, .45

FRICTION LOSS COEFF.; $K_f = \frac{29.1 n^2 L}{R^{4/3}}$ $n = 0.06$ $L = 38.5$ $R = 11.3$

$K_f = \frac{29.1 (0.06)^2 (38.5)}{(11.3)^{4/3}} = 0.159$ ✓

$XKOR = K_e + K_f + 1$

$XKOR = .0.1 + 0.159 + 1 = \underline{1.259}$ 1.61 D.C. 1.56 CTP

COEFF. OF DISCHARGE, COFQ = 2.6 ✓

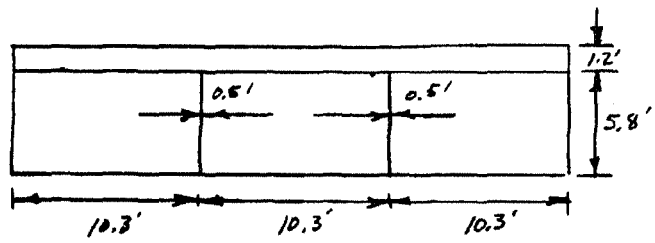
PIER SHAPE COEFF., XK = 1.25 ✓ [SQUARE NOSE & TAIL]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY [illegible]

SUBJECT SCALES ~ UPPER UVAS [OLD CREEK ROAD]

FLOW LENGTH = 30' [illegible]



TRAPIZOIDAL AREA

LOW CHORD = 330.7
BOTTOM ELEV. = 324.9

$A = (31 \times 5.8) = 179.8$

WET PERIMETER

$WP = 2(5.8) + 31 = 42.6$

$R = A/WP = 4.22$

DETERMINE KKOR

INTAKE COEFF. K_i IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE $K_i = K_o \times K_s$

ENTRANCE LOSS K_e ; $D = \frac{2h+b}{3} = \frac{2(5.8)+31}{3} = 14.2$

$R/D = 4.22/14.2 = 0.297$

USING NOLTE CHART $K_o = 0.1$ .15

$K_s = 0.9$ [45° WING WALLS IN DIRECTION OF FLOW]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS [OLD CREEK ROAD]

CONTINUED

ENTRANCE LOSS, $K_e = K_o \times K_s$

$K_e = 0.1 \times 0.9 = 0.09$ .41

FRICTION LOSS COEFF.; $K_f = \frac{29.1 (n)^2 L}{R^{4/3}}$ $n = 0.03$ $L = 30.0$ $R = 4.22$

$K_f = \frac{29.1 (0.03)^2 (30)}{(4.22)^{4/3}} = 0.115$

$XKOR = K_e + K_f + 1$

$XKOR = 0.09 + .115 + 1 = 1.205$ .41 1.52

COEFF. OF DISCHARGE; COFQ = 2.6

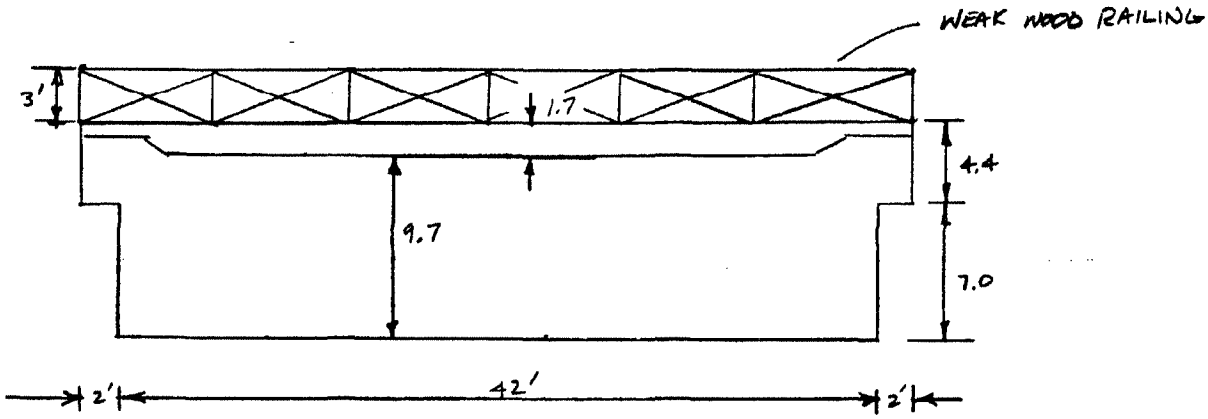
PIER SHAPE COEFF; XK = 1.25 [SQUARE NOSE & TAIL]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY CDA

SUBJECT SCALES ~ UPPER UVAS @ HERITAGE WAY

FLOW LENGTH = 20'



TRAPIZOIDAL AREA

LOW CHORD = 341.0
BOTTOM ELEV = 331.3

$$A = 2(2 \times 4.4) + (9.7 \times 42) = 425$$

WET PERIMETER

$$WP = 2(4.4) + 2(7.0) + 42 = 64.8$$

$$R = A/WP = 425/64.8 = 6.5586 \approx 6.56$$

DETERMINE XKOR

INTAKE COEFF. K_i IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE $K_i = K_o \times K_s$

ENTRANCE LOSS; USE BOX CULVERT FORMULA, $D = \frac{2h+b}{3} = \frac{2(9.7)+42}{3}$

$$R/D = \frac{6.56}{20.47} = 0.321$$

USING NOLTE CHART $K_o = 0.1$

$K_s = 0.95$ [60° WING WALLS IN DIRECTION OF FLOW]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS @ HERITAGE WAY

CONTINUED

ENTRANCE LOSS $K_e = K_o \times K_s$

$K_e = 0.1 \times .95 = 0.095$ .13

FRICTION LOSS COEFF., $K_f = \frac{29.1 (n)^2 L}{R^{4/3}}$ $n = 0.025$ $L = 20'$ $R = 6.56$

$$K_f = \frac{29.1 (0.025)^2 (20')}{(6.56)^{4/3}} = 0.0296$$

$XKOR = K_e + K_f + 1$

$XKOR = \overset{.13}{0.095} + 0.0296 + 1 = \overset{1.16}{\underline{\underline{1.125}}}$

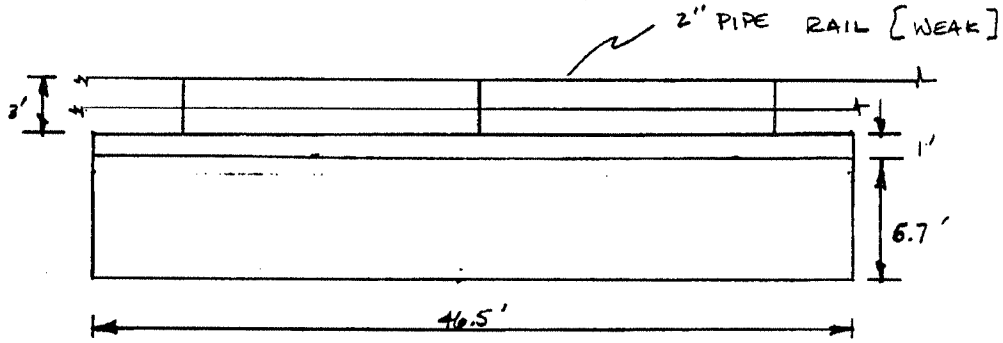
COEFF. OF DISCHARGE; COFQ = 2.6

NO PIERS ∴ XK = 0

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
SUBJECT SCALES ~ UPPER UVAS @ THOUSAND TRAILS RV PARK
DESIGNED BY TRW
CHECKED BY CDA

FLOW LENGTH = 20'



TRAPIZOIDAL AREA

LOW CHORD = 352.5

BOTTOM ELEV = 346.8

$A = 46.5 \times 6.7 = 311.55$ SF

WET PERIMETER

$WP = 2(6.7) + 46.5 = 59.9$

$R = A/WP = \frac{311.55}{59.9} = 5.20$

DETERMINE XKOR

INTAKE COEFF, K_i IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE ; $K_i = K_o \times K_s$

ENTRANCE LOSS ; USE BOX CULVERT FORMULA $D = \frac{2h+b}{3}$

$D = \frac{2(6.7) + 46.5}{3} = 19.97$

$R/D = \frac{5.20}{19.97} = 0.26$

USING NOLTE CHART $K_o = 0.10$

$K_s = 0.90$ [45° WING WALLS]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS @ THOUSAND TRAILS

CONTINUED

ENTRANCE LOSS $K_e = K_o \times K_s$

$K_e = 0.1 \times 0.9 = 0.09$ .11

FRICTION LOSS COEFF., $K_f = \frac{29.1\, n^2 L}{R^{4/3}}$ $n = 0.04$ $L = 20'$ $R = 5.20$

$K_f = \frac{29.1\,(0.04)^2\,(20)}{(5.20)^{4/3}} = 0.103$

XKOR = $K_e + K_f + 1$

XKOR = 0.09 (.11) + 0.103 + 1 = 1.19 1.51

COEFF. OF DISCHARGE ; COFQ = 2.6

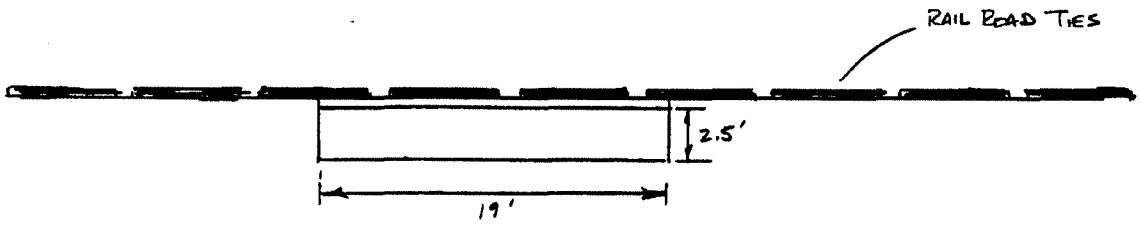
NO PIERS ∴ XK = 0

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 25D-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY [illegible]

SUBJECT SCALES ~ UPPER UVAS @ THOUSAND TRAILS RV PARK [SMALL CROSSING]

FLOW LENGTH = 15 FT



TRAPIZOIDAL AREA

LOW CHORD = 353.2

BOTTOM ELEV = 350.7

$A = 19 \times 2.5 = 47.5$ SF

WET PERIMETER

$WP = 2(2.5) + 19 = 24$

$R = \frac{A}{WP} = \frac{47.5}{24} = 1.98$

DETERMINE XKOR

INTAKE COEFF. K_i IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE $K_i = K_o \times K_s$

ENTRANCE LOSS; USE BOX CULVERT FORMULA, $D = \frac{2h+b}{3}$

$D = \frac{2(2.5) + 19}{3} = 8.0$

$R/D = 1.98/8.0 = 0.248$

USING NOLTE CHART $K_o = 0.10$

$K_s = 1.0$ [NO WING WALLS]

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 28-89-20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS @ THOUSAND TRAILS

CONTINUED

ENTRANCE LOSS $K_e = K_o \times K_s$

$K_e = 0.1 \times 1.0 = 0.10$ .45

FRICTION LOSS COEFF. $K_f = \frac{29.1 (n)^2 L}{R^{4/3}}$ $n = 0.03$ $L = 15'$ $R = 1.98$

$K_f = \frac{29.1 (0.03)^2 (15)}{(1.98)^{4/3}} = 0.158$

XKOR $= K_e + K_f + 1$

YKOR $= 0.10 + 0.158 + 1 = \underline{1.258}$ .45 1.61

COEFF OF DISCHARGE ; COFQ = 2.6

NO PIERS ∴ XK = 0

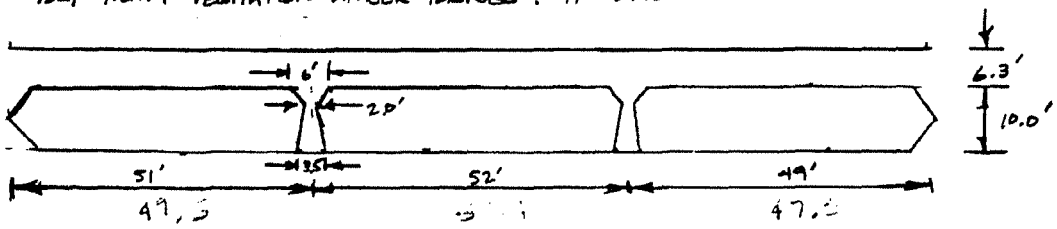
NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250 - 89 - 20
DATE 6/5/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS @ UVAS ROAD

FLOW LENGTH = 24.5

VERY HEAVY VEGITATION UNDER BRIDGE. $n = 0.10$



TRAPIZOIDAL AREA

LOW CHORD = 367.1

BOTTOM ELEV = 357.1

$$A. = (152 \times 10) = 1{,}520 \text{ SF}$$

WET PERIMETER

$$WP = 2(10) + 152 = 172$$

$$R = A/WP = 1520/172 = 21.11$$

DETERMINE VKOR

INTAKE COEFF. K_i IS RELATED TO AMOUNT OF CONTRACTION RESULTING BEHIND THE ORIFICE $K_i = K_o \times K_s$

ENTRANCE LOSS; ASSUMING THAT THE BOX CULVERT FORMULA IS APPLICABLE, $D = \frac{2h + b}{3} = \frac{2(10) + 152}{3} = 57.33$

$$R/D = \frac{21.11}{57.33} = 0.368$$

USING THE NOLTE CHART $K_o = 0.1$ .45

$K_s = 0.98$ [70° WING WALLS IN DIRECTION OF FLOW].

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

JOB NO. 250-89-20
DATE 6/6/91
DESIGNED BY TRW
CHECKED BY

SUBJECT SCALES ~ UPPER UVAS @ UVAS ROAD

CONTINUED

ENTRANCE LOSS, $K_e = K_o \times K_s$

$K_e = 0.1 \times 0.98 = 0.098$ .44

FRICTION LOSS COEFF.; $K_f = \frac{29.1\, n^2 L}{R^{4/3}}$ $n = 0.10$ $L = 24.5$ $R = 21.11$

$K_f = \frac{29.1\,(0.1)^2\,(24.5)}{(21.11)^{4/3}} = 0.122$

XKOR $= K_e + K_f + 1.0$

XKOR $= 0.098 + 0.122 + 1.0 = 1.22$ .44 1.56

COEFF. OF DISCHARGE; COFQ = 3.0 [OVERTOP ROAD ON SIDES]

PIER SHAPE COEFF; XK = 1.25 [SQUARE NOSE & TAIL]

FIELD FORMS

FIELD OBSERVATIONS INDEX

Santa Clara, California

(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

STREAM NAME	DESCRIPTION	FILE NAME	ID. NO.
Upper Uvas	Field Observations at Uvas Rd.	002.pdf	N/A
Upper Uvas	Field Observations at Thousand Trails RV Park	003.pdf	
Upper Uvas	Field Observations at Thousand Trails RV Park	004.pdf	
Upper Uvas	Field Observations at Heritage Way	005.pdf	
Upper Uvas	Field Observations at Old Creek Rd.	006.pdf	
Upper Uvas	Field Observations at Watsonville Rd.	007.pdf	
Upper Uvas	Field Observations at Hecker Pass Rd.	008.pdf	

JOB NUMBER: 250-89-20 DATE: 3-20-91 OBSERVED BY: TRW / CDA

FIS FIELD OBSERVATIONS FOR Llvas CREEK AT Llvas Road

Type of Bridge*		DIMENSIONS			Bridge I.D.
	pipe	diameter		flow length 24.4	Date 1923 (?)
	box(es)	height 10'		skew angle 10°	Other
/	bridge	width at top 24.4		true opening? y (n)	
	other	width at bottom		s/s left (h:v) **	(in bridge)
* sketch on back		material		s/s right (h:v) **	(in bridge)

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **	"	30°	38'	Varies	
Upstream Right **	Concrete	30°			
Downstream Left **	"	30°	30'		
Downstream Right **	"	30°			

3:1 or 4:1

2:1

2:1

PIER DATA*
Type concrete
No. 2
Width 3.5' @ base
* sketch on back

ENTRANCE ROUNDING
Top SQUARE
Sides

RAILING DATA
Type Concrete
Height
Length

HEIGHT DATA (feet)
Invert to L.C. 10'
Invert to T.R. 16.3
L.C. to T.R. 6.3'

Height of Roadway Fill

	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES

	L.O.B. **	R.O.B. ** (Road Low)	CHANNEL
Downstream	~~.05~~	~~.05~~	.12
End D/S Wingwalls	~~.1~~	.1	~~.~~
At bridge			.10
End U/S Wingwalls	~~.~~	.1	~~.~~
Upstream	~~.05~~	~~.05~~	.12

FIELD PHOTOS Roll No.

	Photo No.
Looking D/S	12
D/S Face	13
Looking U/S	15
U/S Face	14
Looking U/S LOB Road	16
	17

NOTES Thick Vegetation w/in Channel

P16) * Note Small "Lake"

P17) Low Spot in Road on ROB

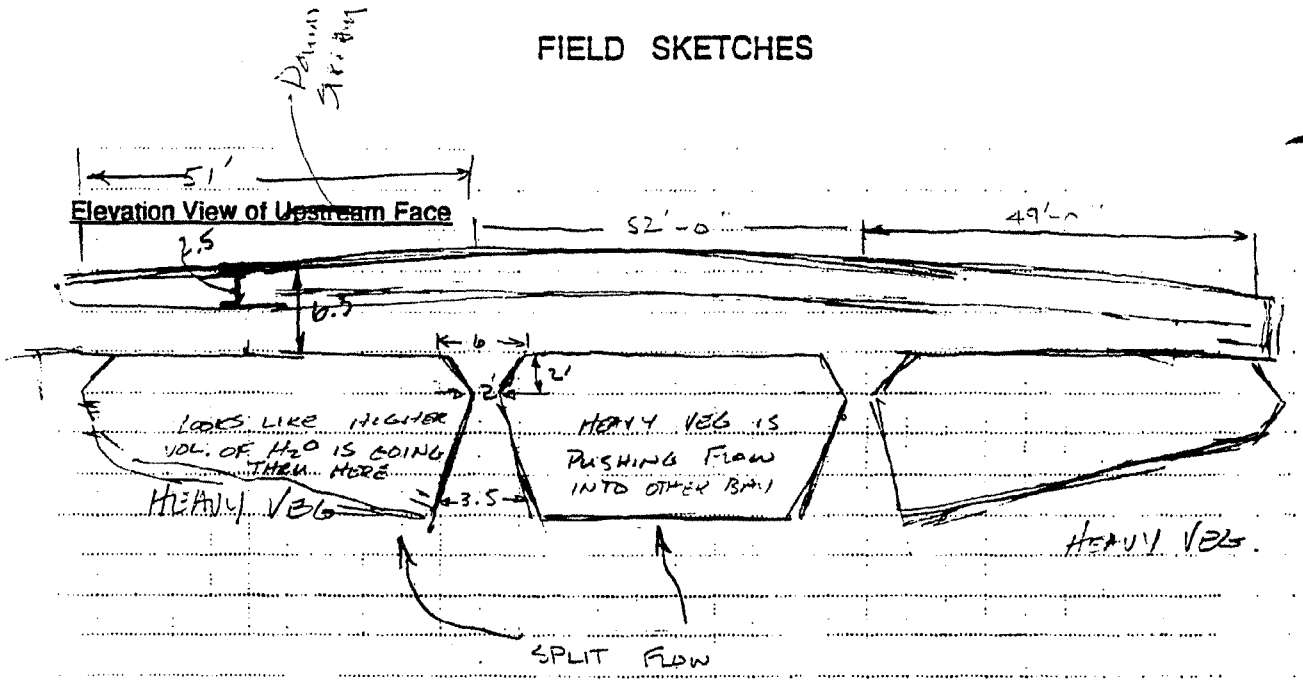
Dir Flow will be through low point

a Trailer Park / RV campground D/S LOB

** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road

Other

NOTES

JOB NUMBER:_____ DATE:_____ OBSERVED BY:_____

3RD STOP 2ND BRIDGE

FIS FIELD OBSERVATIONS FOR UVAS CREEK AT THOUSAND ~~CHARS~~ TRAILS TRAIL RV PARK

SMALL RV CROSSING

Type of Bridge*		DIMENSIONS			Bridge I.D.	NONE
	pipe	diameter	flow length	15'	Date	
	box(es)	height	skew angle		Other	
	bridge	width at top	true opening? y n			
CONCRETE	other SLAB	width at bottom	s/s left (h:v) **	(in bridge)		
* sketch on back		material	s/s right (h:v) **	(in bridge)		

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **	CONCRETE	90			
Upstream Right **	CONC.	90			
Downstream Left **					
Downstream Right **					

PIER DATA* NO	
Type	
No.	
Width	

* sketch on back

ENTRANCE ROUNDING NO	
Top	ROUND
Sides	

RAILING DATA	NO RAIL
Type RR TIE	CUT ~~GUARD~~
Height	.6
Length	6 FT w/ SPACERS

- w/ 1.0' SPACING
- 9 TIES BOTH SIDES

HEIGHT DATA (feet)	
Invert to L.C.	2.5
Invert to T.R.	3.25
L.C. to T.R.	.75

Height of Roadway Fill	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES	L.O.B. **	R.O.B. **	CHANNEL
Downstream	0.1	.08	.04
End D/S Wingwalls			
At bridge			.03
End U/S Wingwalls			
Upstream	.06	0.06	0.03

FIELD PHOTOS Roll No.	Photo No.
Looking D/S	21
D/S Face	20
Looking U/S	18
U/S Face	19

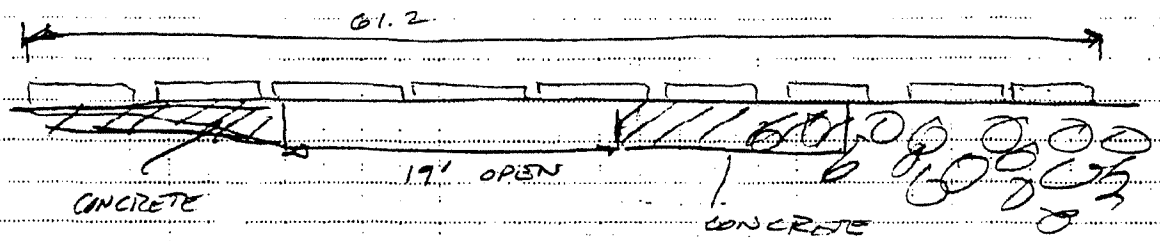
NOTES

- Bridge will not be washed out in high water flooding, but will be inundated.

** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road

Other

NOTES

JOB NUMBER:_____ DATE: 3/20 OBSERVED BY:_____

FIS FIELD OBSERVATIONS FOR UVAS CREEK AT THOUSAND ~~OAKS~~ TRAILS RV PARK

Type of Bridge*		DIMENSIONS			Bridge I.D.	
	pipe	diameter		flow length 20'	Date	
	box(es)	height		skew angle 0	Other	
✓	bridge	width at top 20'		true opening? (y) n		
steel I beams — WOOD DECK	other	width at bottom 46.5		s/s left (h:v) **	(in bridge)	
	* sketch on back	material		s/s right (h:v) **	(in bridge)	

Some Rock slope protection to sides under bri

CONCRETE ABUTMENTS

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **	CONC.	45°	6.5		
Upstream Right **	CONC.	45°	6.5	VERT	VERT
Downstream Left **		45	6.5		
Downstream Right **		45	6.5		

PIER DATA*	
Type	NONE
No.	
Width	
* sketch on back	

ENTRANCE ROUNDING	
Top	
Sides	

WIDE FLANGE BEAMS

RAILING DATA	
Type	2" PIPE
Height	3'
Length	

HEIGHT DATA (feet)	
Invert to L.C.	6.7
Invert to T.R.	7.7
L.C. to T.R.	1.0'

Height of Roadway Fill	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES	L.O.B. **	R.O.B. **	CHANNEL
Downstream	.07	.06	.04
End D/S Wingwalls			
At bridge			.04
End U/S Wingwalls			
Upstream	.08	.07	.05

FIELD PHOTOS Roll No.	Photo No.
Looking D/S	22
D/S Face	23
Looking U/S	25
U/S Face	24

NOTES Rails weak (bolts coming out of deck) would go in flood

Bridge otherwise solid

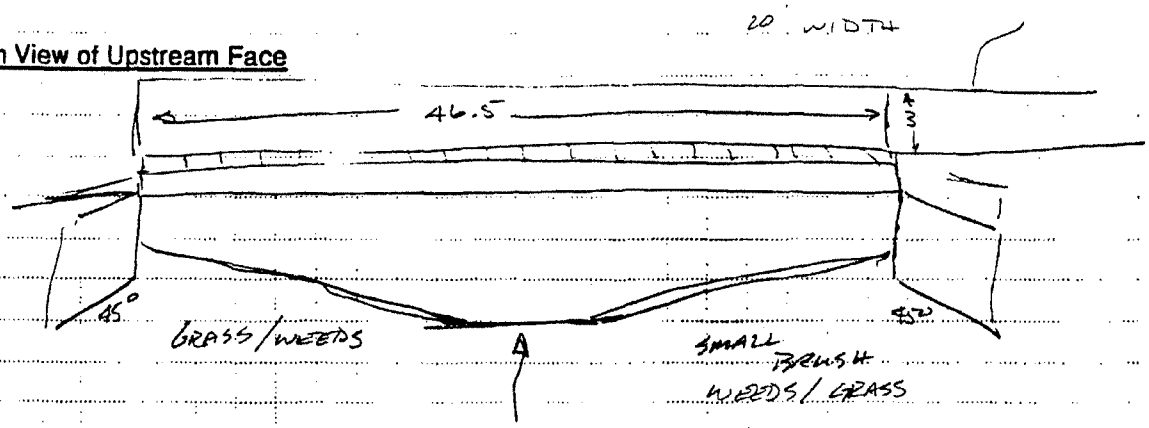
Riprap D/S & U/S ROB

- water over bridge in high water conditions

** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road

Other

NOTES

JOB NUMBER:_____ DATE:_____ OBSERVED BY:_____

FIS FIELD OBSERVATIONS FOR Uvas CREEK AT Heritage Way ~~Ave~~

Type of Bridge*		DIMENSIONS			Bridge I.D.
	pipe	diameter		flow length 20'	Date
	box(es)	height		skew angle 0	Other
✓	bridge	width at top		true opening? (y) n	
	other	width at bottom		s/s left (h:v) ** 1 ~~.5:1~~ (in bridge) Vert	
* sketch on back		material		s/s right (h:v) ** 1 ~~.5:1~~ (in bridge) Vert	

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **	Concrete			1:1	1:1
Upstream Right **		30°			
Downstream Left **	~~↓~~			1.5:1	1.5:1
Downstream Right **	↓			1:1	1:1

PIER DATA*	
Type	
No.	—
Width	

* sketch on back

ENTRANCE ROUNDING	
Top	NO
Sides	NO

RAILING DATA	
Type	Wood
Height	3'
Length	46'

HEIGHT DATA (feet)	
Invert to L.C.	9.7
Invert to T.R.	11.4
L.C. to T.R.	1.7

Height of Roadway Fill

	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES

	L.O.B. **	R.O.B. **	CHANNEL
Downstream	.04	.04	.03 *
End D/S Wingwalls		VERT	
At bridge		VERT	0.025
End U/S Wingwalls		VERT	
Upstream	.05	.045	.03

FIELD PHOTOS Roll No.

	Photo No.
Looking D/S	26
D/S Face	27
Looking U/S	28
U/S Face	29

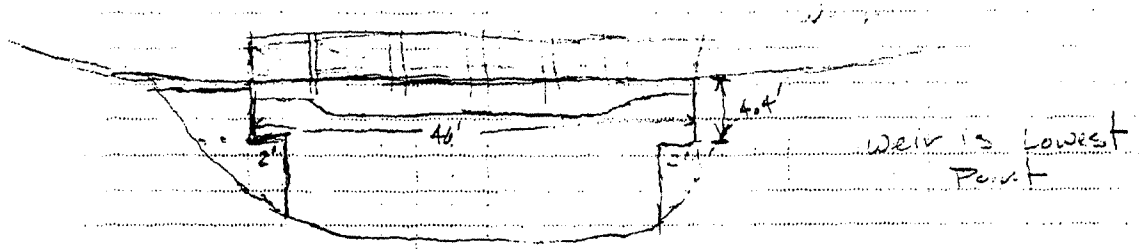
NOTES Wood Deck on I-beams

* clean, straight well maintained

** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road

Other

NOTES

JOB NUMBER:_____ DATE:_____ OBSERVED BY:_____

FIS FIELD OBSERVATIONS FOR LIVAS CREEK AT OLD CREEK RD

Type of Bridge*		DIMENSIONS			
	pipe	diameter		flow length	30'
3 BOX	box(es)	height		skew angle	
	bridge	width at top	21	true opening	
	other	width at bottom	30	s/s left (h:v) **	3:1 (in bridge)
* sketch on back		material	CONC.	s/s right (h:v) **	4:1 (in bridge)

Bridge I.D.	NONE
Date	
Other	

S/S INTO CULVERT

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **	CONC	45	4'	VERT	3:1
Upstream Right **	CONC	45	8'	VERT	4:1
Downstream Left **	CONC	90	5' EXTEND	VERT	VERT
Downstream Right **	CONC	90	5' EXTEND	VERT	VERT

PIER DATA*	
Type	CONC
No.	2
Width	6"

* sketch on back

ENTRANCE ROUNDING	
Top	NO
Sides	

RAILING DATA	
Type	NONE
Height	
Length	

HEIGHT DATA (feet)	
Invert to L.C.	5.8
Invert to T.R.	7.0
L.C. to T.R.	1.2

Height of Roadway Fill

	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES

	L.O.B. **	R.O.B. **	CHANNEL
Downstream	.04	.04	0.035
End D/S Wingwalls			
At bridge	.03	.03	.03
End U/S Wingwalls			
Upstream	.065	.07	.035

FIELD PHOTOS Roll No.

	Photo No.
Looking D/S	30
D/S Face	31
Looking U/S	33
U/S Face	32

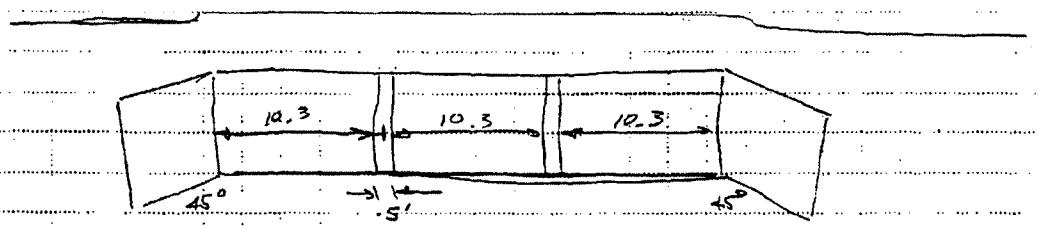
34 WEATHER COND. OF ROAD LOOKING NE

NOTES — [illegible] will be overtopped [illegible] road may [illegible] sides

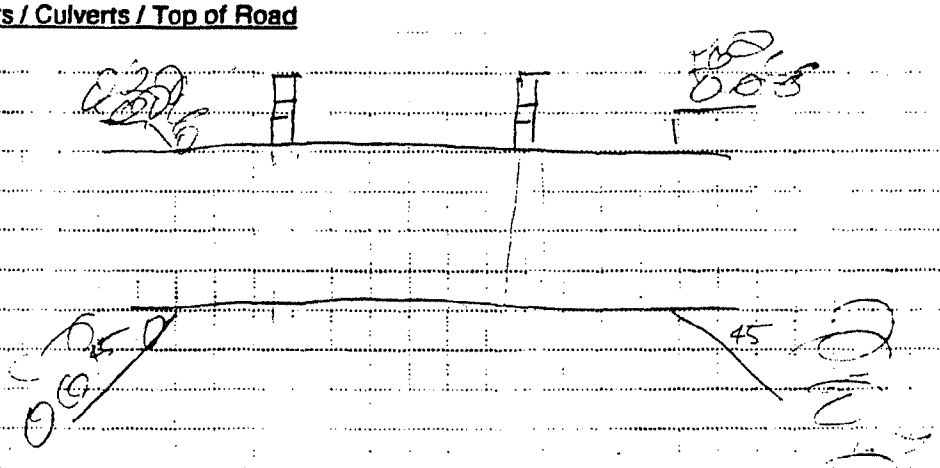
** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road



Other

NOTES

JOB NUMBER:_____ DATE:_____ OBSERVED BY:_____

FIS FIELD OBSERVATIONS FOR Uvas CREEK AT Watsonville Rd

Type of Bridge*		DIMENSIONS				Bridge I.D.
	pipe	diameter		flow length	38.5	Date
	box(es)	height	13'	skew angle	No	Other
/	bridge	width at top		true opening? y n		
	other	width at bottom		s/s left (h:v) **	2:1	(in bridge)
* sketch on back		material		s/s right (h:v) **	2:1	(in bridge)

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **	N/A			2:1	
Upstream Right **				2:1	
Downstream Left **					
Downstream Right **					

PIER DATA*
- Type Square Nose
- No. 3
- Width 1.7'

* sketch on back

ENTRANCE ROUNDING
- Top NO
- Sides

RAILING DATA
- Type Galv. steel
- Height
- Length Entire Bridge

HEIGHT DATA (feet)
- Invert to L.C. 13'
- Invert to T.R. 19'
- L.C. to T.R. 6'

Height of Roadway Fill

	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES

	L.O.B. **	R.O.B. **	CHANNEL
Downstream	[illegible]	.06	.1
End D/S Wingwalls			
At bridge			0.06
End U/S Wingwalls			
Upstream	.06	.05	.1

FIELD PHOTOS Roll No.

	Photo No.
Looking D/S	1
D/S Face	2
Looking U/S	3 & 4
U/S Face	36 35

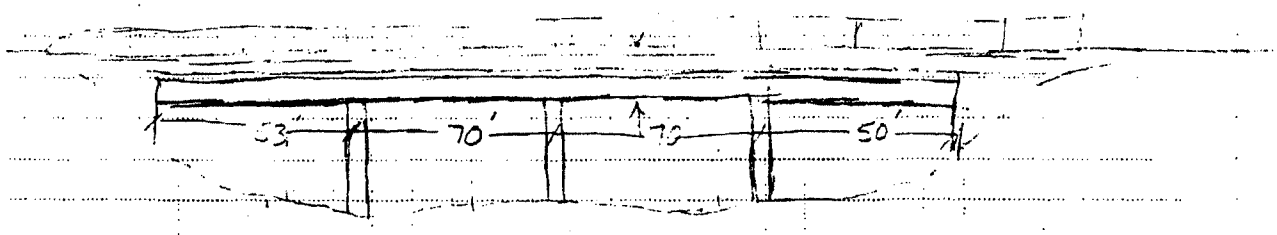
NOTES Deck overhang - piers L, 3' on side

Lots of brush in channel

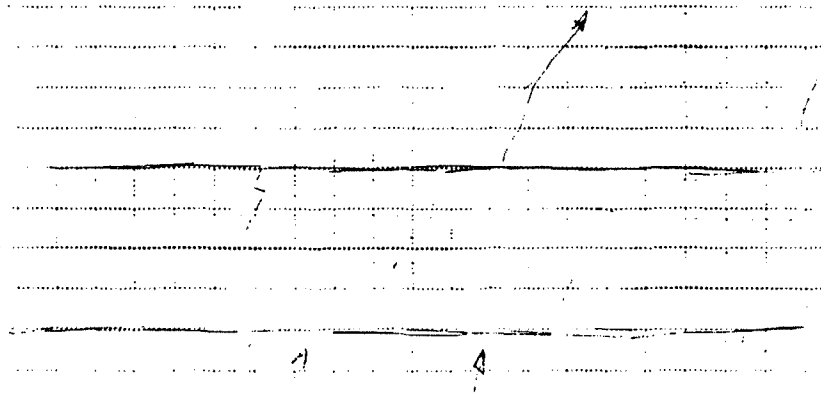
** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road



Other

NOTES

JOB NUMBER:_____ DATE: 7/20/91 OBSERVED BY: [illegible]

FIS FIELD OBSERVATIONS FOR UVAS CREEK AT Hecker Pass

Type of Bridge*		DIMENSIONS			
	pipe	diameter		flow length 49'	Bridge I.D.
	box(es)	height		skew angle w/ creek	Date 1957
3 PIER	bridge	width at top 34		true opening? y n	Other WAS ON GUARD RAIL
	other	width at bottom 34		s/s left (h:v) ** 1.5 : 1	(in bridge)
* sketch on back		material CONC.		s/s right (h:v) ** 1.5 : 1	(in bridge)

WINGWALL DATA	Type	Angle	Length	S/S end	S/S face
Upstream Left **					
Upstream Right **					
Downstream Left **					
Downstream Right **					

SACKSLOPE PROTECT.

PIER DATA*	
Type	⬭
No.	3
Width	1'

* sketch on back

ENTRANCE ROUNDING	
Top	NO
Sides	

RAILING DATA	
Type	METAL GUARD RAIL
Height	2'
Length	WHOLE BRIDGE +

HEIGHT DATA (feet)	
Invert to L.C.	20'
Invert to T.R.	24'
L.C. to T.R.	4'

Height of Roadway Fill	Left **	Right **
upstream		
downstream		

MANNINGS 'n' VALUES	L.O.B. **	R.O.B. **	CHANNEL
Downstream	.05	.05	.05
End D/S Wingwalls			
At bridge			.04
End U/S Wingwalls			
Upstream	.075	.075	.075

FIELD PHOTOS	Roll No. Photo No.
Looking D/S	5
D/S Face	6 7
Looking U/S	8 9
U/S Face	10

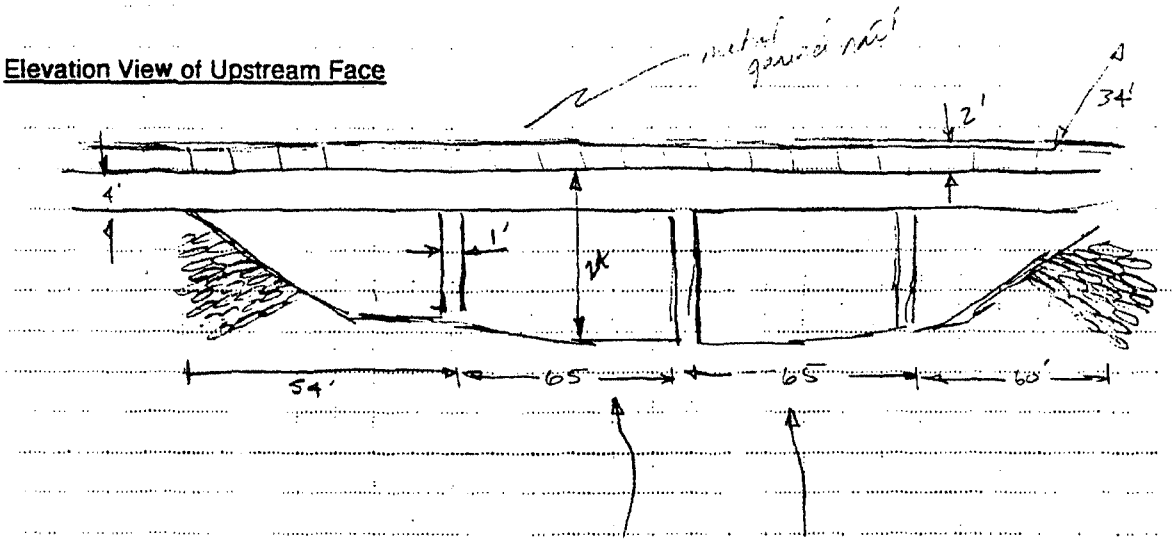
NOTES Rock slope protection on both sides D/S [COBBLE BOULDER SIZE]

U/S LOB rock slope protect is sliding away - weak is undermining it.

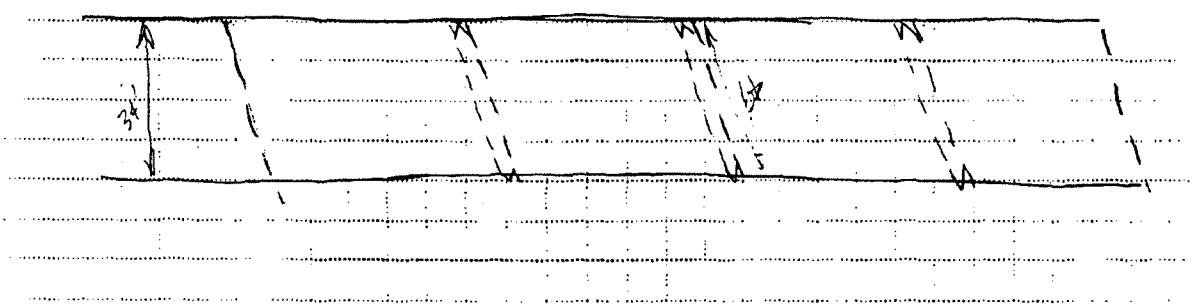
** NOTE: All references to "left" and "right" are oriented looking downstream.

FIELD SKETCHES

Elevation View of Upstream Face



Plan View of Piers / Culverts / Top of Road



Other

NOTES

MAPPING
INFORMATION

MAPPING INFORMATION INDEX

Santa Clara, California

(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

STREAM NAME	DESCRIPTION	FILE NAME	ID NO.
Upper Uvas	Map & General Plans	N/A	Hard Copy

SECTION 5
FIS

FIS INDEX

Santa Clara, California

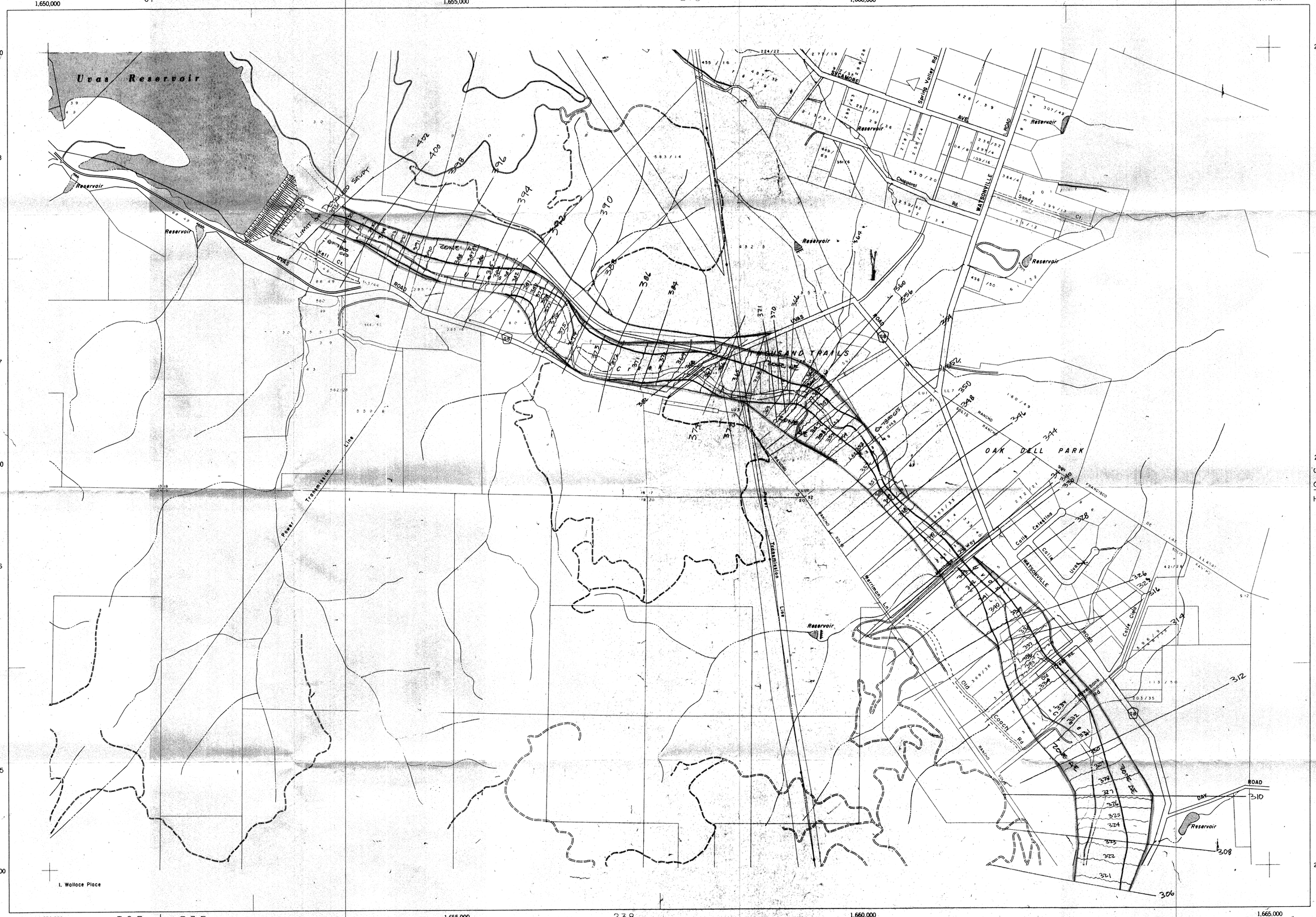
(COMMUNITY NAME, STATE)

FLOOD INSURANCE STUDY

STREAM NAME	DESCRIPTION	FILE NAME	ID NO.
N/A	N/A	N/A	N/A

SERIES: 500

200 N 1650 E



SCALE 1" = 500'

500 0 500 1000 1500 2000

1 : 6000

LAMBERT CONFORMAL CONICAL PROJECTION 1927 NORTH AMERICAN DATUM

California State Coordinate System Zone 3

GEORGE S. NOLTE CONSULTING CIVIL ENGINEERS, INC.

GEORGE S. NOLTE
REGISTERED CIVIL ENGINEER NO. 7595

COUNTY OF SANTA CLARA

CALIFORNIA

COUNTY SURVEYOR'S OFFICE

JAMES F. SIRR
COUNTY SURVEYOR

COPYRIGHT 1982 by COUNTY of SANTA CLARA CALIFORNIA ALL RIGHTS RESERVED

INFORMATION	DATE
CADASTRAL	JULY 1988

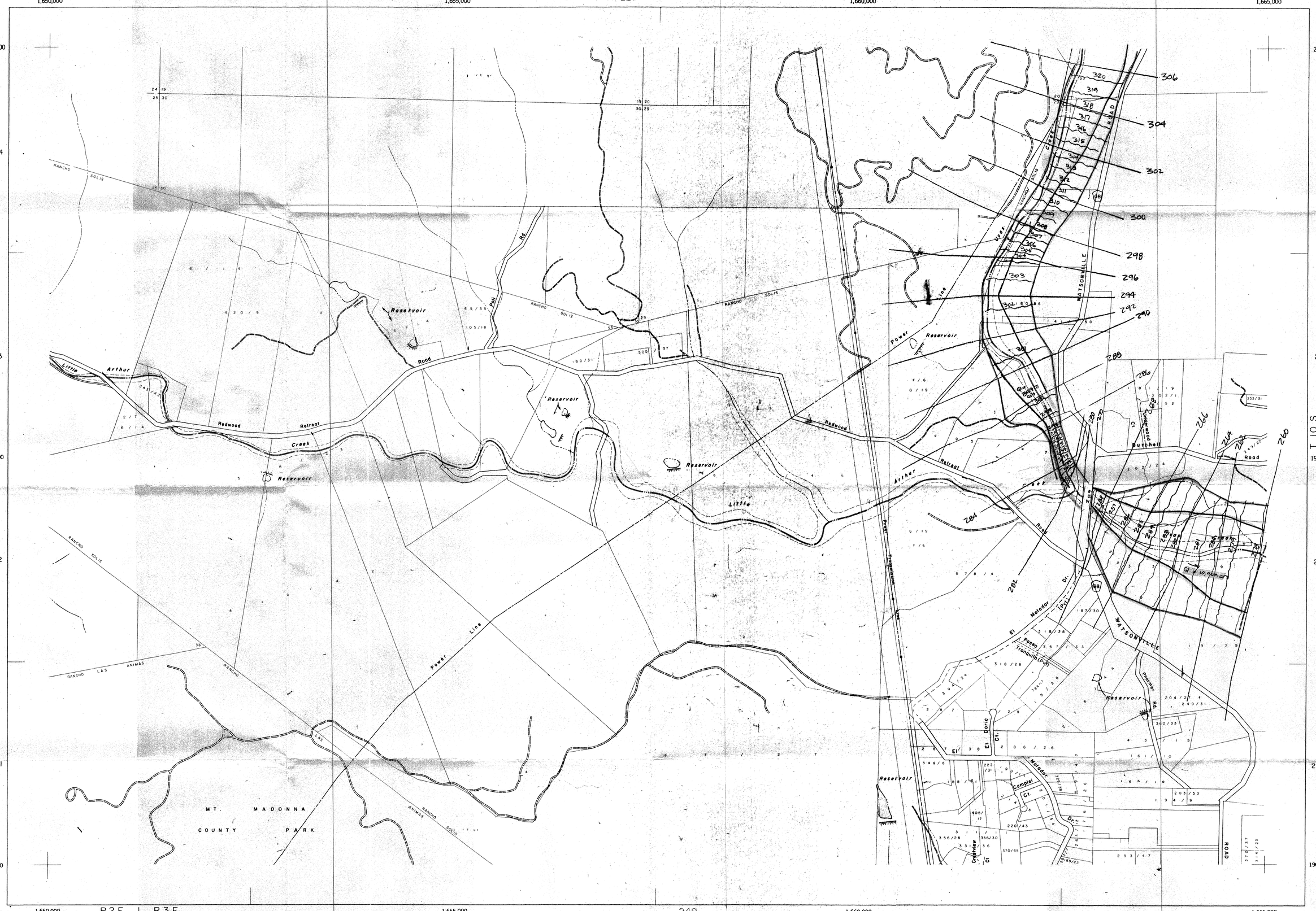
NOTE: This base map is copyrighted by the County of Santa Clara; distribution in conjunction with the National Flood Insurance Program is by permission. Any other use is prohibited. Contact the Santa Clara County Surveyor; 70 West Hedding Street; San Jose, California 95110 for information regarding any other use or publication.

UPPER UVAS CREEK

SHEET 227

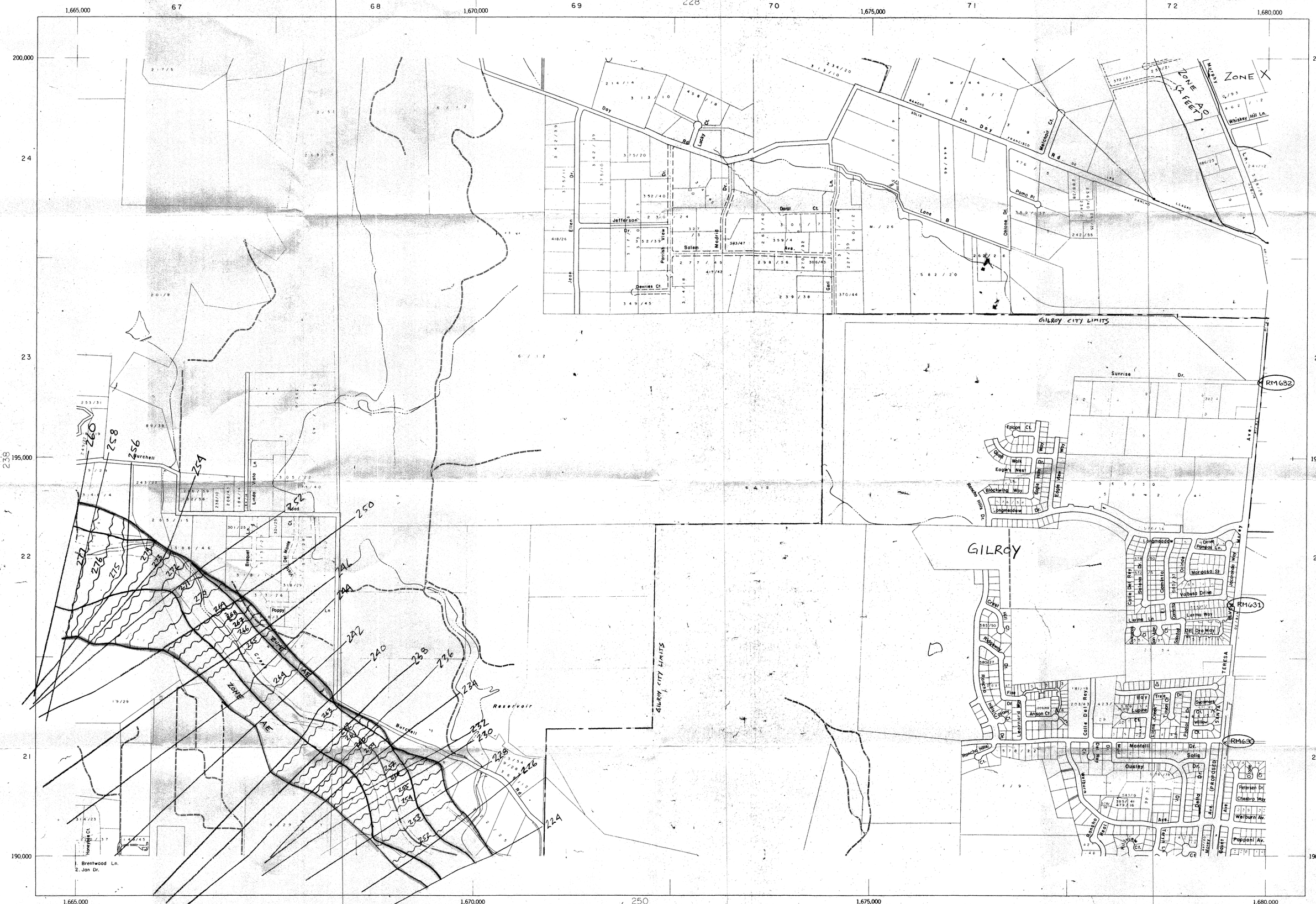
SERIES: 500

190 N 1650 E



SERIES: 500

190 N 1665 E


1,665,000
67
68
1,670,000
69
228
70
1,675,000
71
72
1,680,000
200,000
24
23
195,000
22
21
190,000
238
240
250
Day Rd
Jacky Ct.
Jefferson Dr.
Ellen Dr.
Jean Dr.
Parrish View
Madrid Dr.
Salem Ave.
Devries Ct
Dorsi Ct.
Gari La.
Lane B
Melchior Ct.
Pomo Dr
Ohlone Dr.
Whiskey Hill Ln.
Murphy
ZONE X
ZONE AE
GILROY CITY LIMITS
Sunrise Dr.
RM632
Falcon Ct.
Eagle's Nest
Blackwing Wby
Rancho Hills Dr.
GILROY
Longmeadow
Valbsb Drive
Morgoka St
Lermo Way
Del Dre Way
RM631
Calle Del Rey
Stiles Dr.
Camino
Pasy
Olivos
Great Hill Ct.
Ridgeway
Rancho Hills Ct.
Fife
Anson Ct
Calle De Rey
Bay
Lupine
Trek
Sycamore
Willow
Montelli Dr.
Solig
Ousley
Delta Dr.
Ave.
Rancho Hills Ct.
Burchell
Poppy
Bracquet
Del Monte
Lindo Vista Ln
Brentwood Ln.
Jan Dr.
Reservoir
ZONE AE
Creek
Rd
Petersen Dr
Chesbro Way
Walburn Av.
Poppani Av.
RM630
TERESA
SANTA
PROPOSED
Ave.
Monterey
Equit
Uvas
Ranchos
Hills
Ct.
Way
Dr.
Ct.
Rancho Solis
San Francisco
Rancho Llagas
Llagas
Creek
Uvas
Creek
Ranchos
Hills
Ct.
Hill
Ct.
Ridge
Ct.
Ridge
Way
Ridge
Ridge
Ridge

SERIES: 500

180 N 1665 E

SCALE 1" = 500'

500 0 500 1000 1500 2000

1 : 6000

LAMBERT CONFORMAL CONICAL PROJECTION 1927 NORTH AMERICAN DATUM

California State Coordinate System Zone 3

GEORGE S. NOLTE CONSULTING CIVIL ENGINEERS, INC.

GEORGE S. NOLTE
REGISTERED CIVIL ENGINEER NO. 7595

COUNTY OF SANTA CLARA

CALIFORNIA

COUNTY SURVEYOR'S OFFICE

JAMES F. SIRR
COUNTY SURVEYOR

COPYRIGHT 1982 by COUNTY of SANTA CLARA, CALIFORNIA ALL RIGHTS RESERVED

INFORMATION	DATE
CADASTRAL	JULY 1988

NOTE: This base map is copyrighted by the County of Santa Clara; distribution in conjunction with the National Flood Insurance Program is by permission. Any other use is prohibited. Contact the Santa Clara County Surveyor; 70 West Hedding Street; San Jose, California 95110 for information regarding any other use or publication.

UPPER UVAS CREEK

SHEET 250